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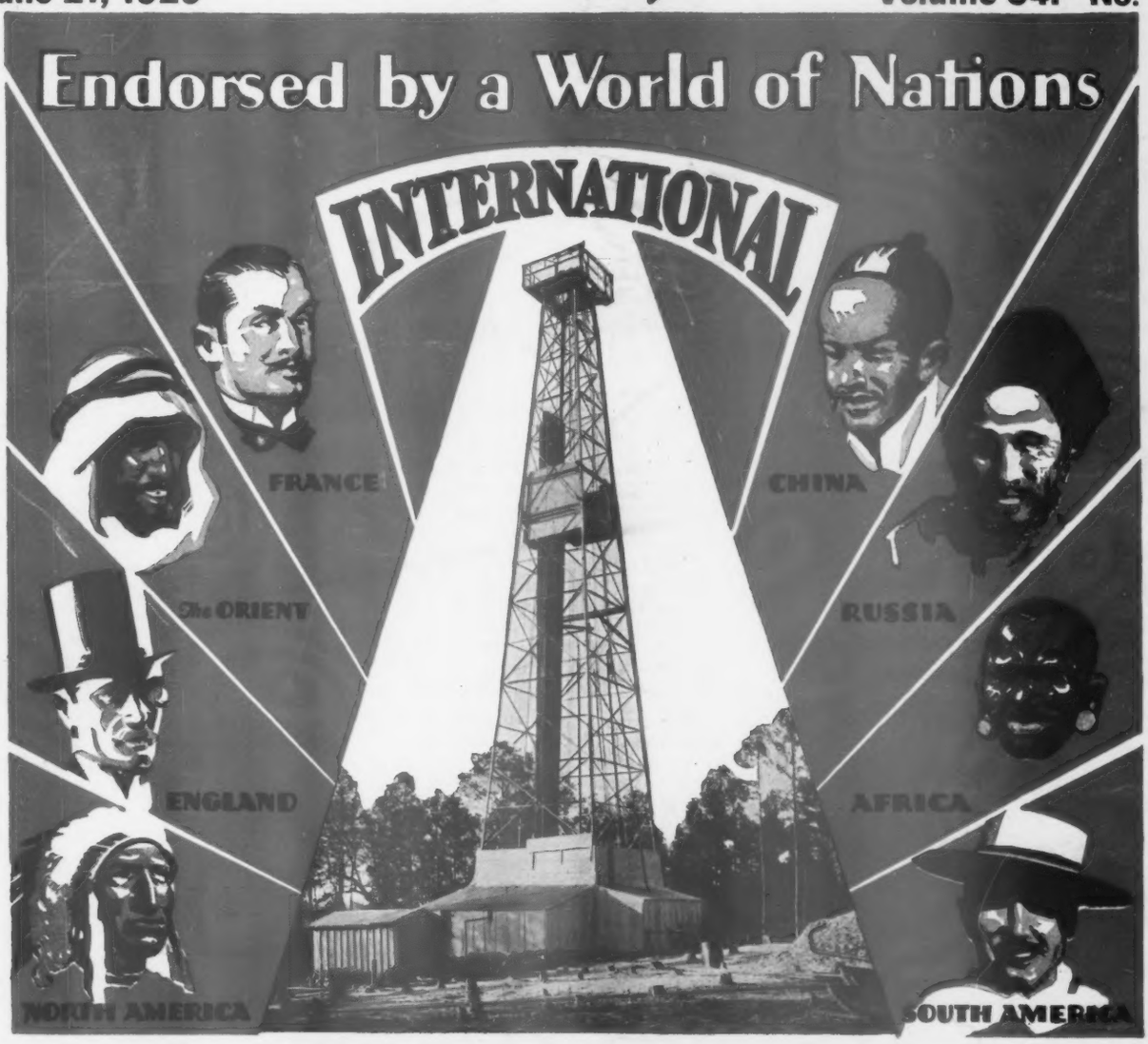
The OIL WEEKLY

Exclusively Devoted To The Production and Transportation of Oil and Gas

Engineering News Statistics

June 21, 1929 Volume 54. No. 1



IDECO GALVANIZED STEEL DERRICKS

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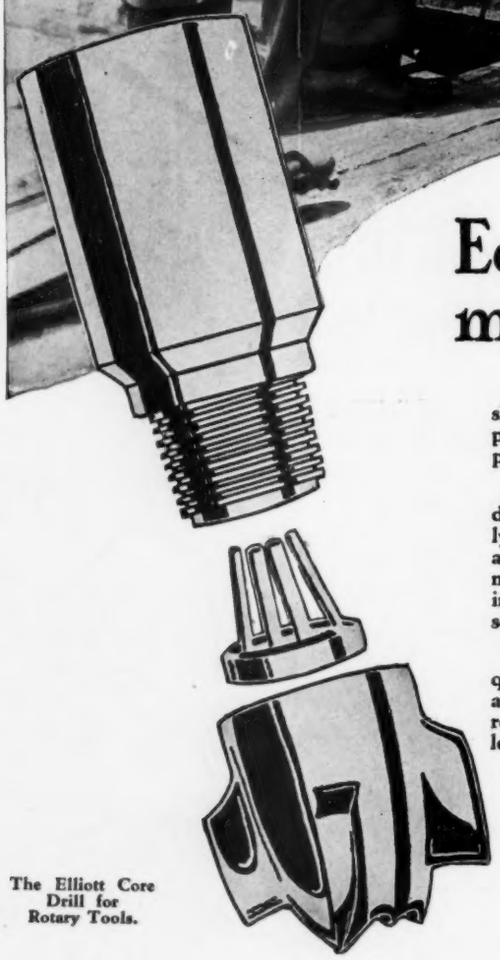

The Elliott Core Drill for Rotary Tools.

Cheap Coring Equipment does not necessarily mean *Economical* Coring.....

In the coring of oil wells, economy shows only in the total cost per foot of perfect core recovered—not in the cost per dulled cutterhead.

As, for example, in ordinary deep drilling, as now practiced, approximately one tour is required to run in, take a perfect, full length core of all the formations penetrated by the average drilling bit, and pull out—with the efficient, scientifically designed Elliott Core Drill.

The same amount of time will be required to run in, core and pull out with a less efficient core drill—but the core recovered may be several feet short—less perfect—less informative. In fact, two runs may be required to recover the same footage of good core that the Elliott recovers in one run. In the one instance the cost per foot of core recovered would be the same, and the core inadequate—in the latter instance, the cost for an equal footage of core recovered would be much greater and the core of questionable value.

Elliott Core Drills are the result of years of pioneering and intensive development of coring operations. They are designed to recover quality cores efficiently and economically. Their use insures adequate, informative cores at minimum cost per foot with the highest factor of safety and dependability.

You Can't Go Wrong With Elliott

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ELLIOTT CORE DRILLS

The OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 3301 Buffalo Drive, Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1897.

4 FEATURES OF GASO PUMP, FIG. 1508

1 Main and Pinion Shaft bearings are Timken Tapered Roller Bearings.

2 Main and Pinion Gears of continuous tooth Herringbone construction.

3 H-Column Connecting Rod, with babbitt-lined, removable bronze shell at crank end.

4 Pump is fully enclosed, dust-proof, and entirely self lubricated.

An Enduring Connecting Rod..... With Removable Bushing

Our Figure 1508 Pump has a connecting rod of best grade open hearth steel, of "H" construction for utmost strength, correctly balanced for smooth running.

The crosshead end is equipped with bronze bushing. The crank end has a removable, babbitt lined bronze shell, which is easily and quickly renewed in the field.

Gaso Pump & Burner Mfg. Co., Tulsa, Okla.

210 Petroleum Bldg. Fort Worth, Texas

535 Fifth Ave., New York, N. Y.

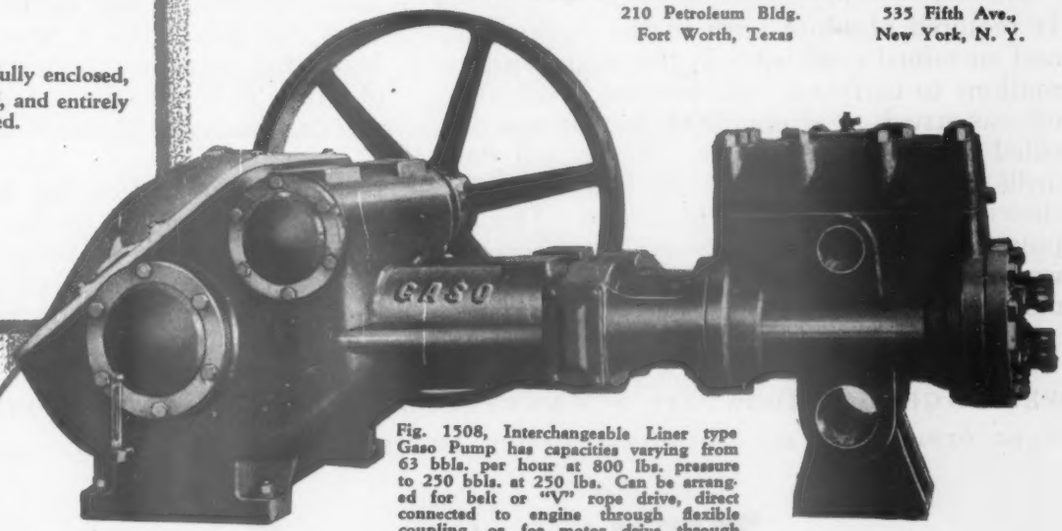
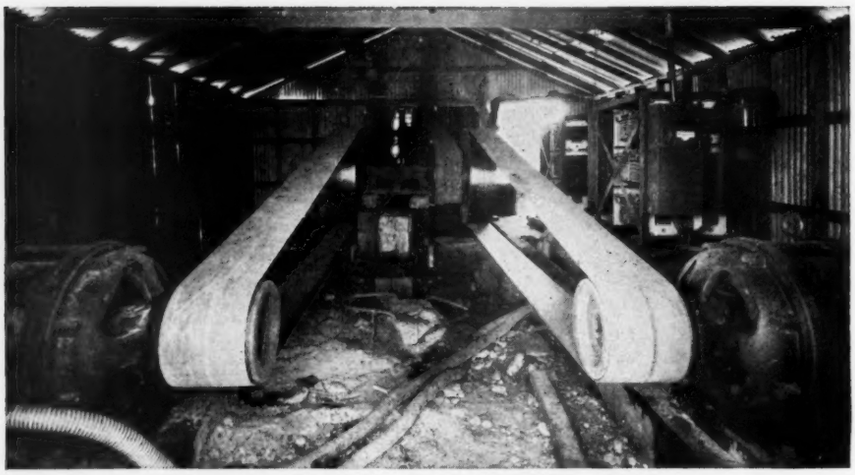


Fig. 1508, Interchangeable Liner type Gaso Pump has capacities varying from 63 bbls. per hour at 800 lbs. pressure to 250 bbls. at 250 lbs. Can be arranged for belt or "V" rope drive, direct connected to engine through flexible coupling, or for motor drive through silent chain or reduction gears.

GASO PUMPS

for every oil industry need

383089



Westinghouse twin motor, cable tool equipment, drilling the world's deepest well.

Drilling the World's Deepest Well

ELECTRICALLY

WHEN the Texon Oil and Land Company's well came in recently in the Big Lake Field, at 8523 feet, a new world's record depth was established.

It required absolute faith in the equipment, and sustained confidence in the unknown formations to carry out this venture. Although oil was struck at around 3000 feet, it was decided to penetrate deeper. Night and day drills pierced new strata. At 6200 feet the showing began to look favorable. Deeper plunged the drills until the real pay horizon was reached, and a record performance set more than a mile and a half below the surface.

For drillers on a well of this character, nothing is more important than dependable equipment —apparatus that will assure uninterrupted service. Westinghouse Twin Motor Drive for cable tool drilling met the final test. It stayed with the job until it was completed. No hesitating, no faltering—a steady, reliable flow of power 24 hours a day. And now, this equipment is ready for the next well.

Detailed information can be obtained from any of the branches of the Oil Well Supply Company, or the National Supply Companies, located in all oil fields, or from any Westinghouse district office.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, EAST PITTSBURGH, PA.
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Switchboards
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"Rolls Royce" says the radiator emblem—and what a world of meaning the message carries!

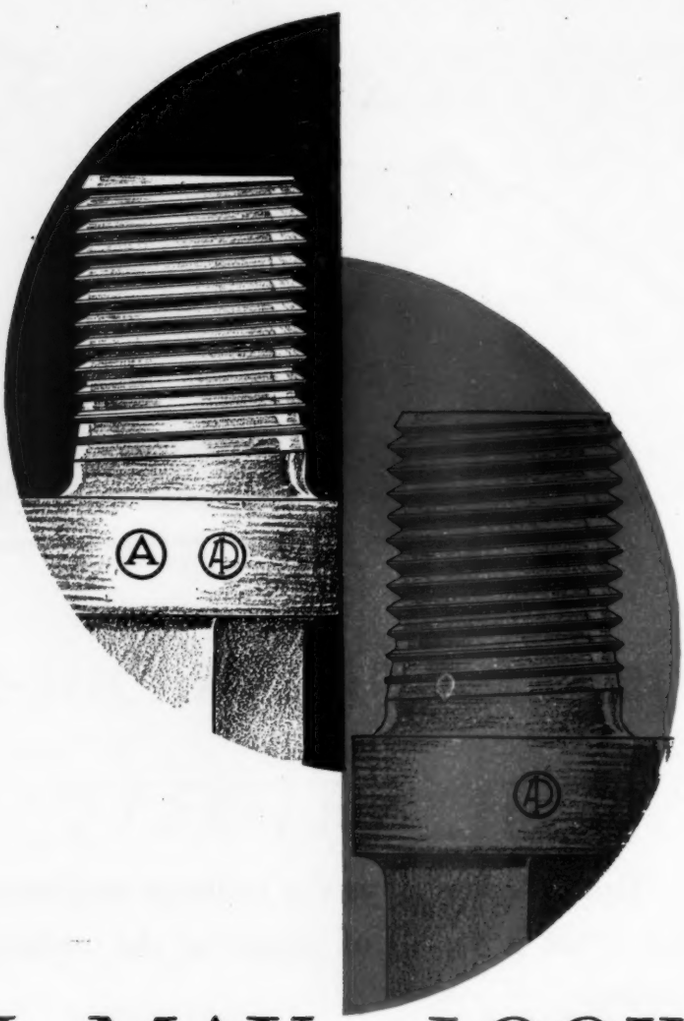
"Cementing by Halliburton," says the well's specifications, and again much is said in few words—permanent insurance against shifting formations, migration of fluids and intrusion of upper water; as long as the well is in existence, the most thorough protection that equipment, experience and engineering skill can provide.

HALLIBURTON

OIL WELL CEMENTING COMPANY

DUNCAN, OKLAHOMA

XUM



BOTH MAY LOOK ALIKE

BUT ONE CARRIES INSURANCE OF QUALITY

BECAUSE IT IS *AXELSON*-MADE

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

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AXELSON SUCKER RODS

THE ROMANCE OF OIL

(Number Four of a Series)

The Supply Store

Back on the shelf of a warehouse, among a thousand items lies a small fishing tool no larger than a man's hand. It has lain there for more than six months.

Out on the lease a driller leans carefully on a brake lever in an endeavor to loosen a stuck stem.

If the driller leans just right, the fishing tool stays in its place on the shelf. If he leans too heavily, the tool becomes of major importance.

Meeting any emergency is the responsibility of the driller. Back of the driller is the supply store. For the supply store to go one mile with the man on the lease is all in the work of the day. Going with him twain is the common occurrence.

HERCULES SUPPLY COMPANY

J·T·McCARTHY JR

EVERYTHING FOR OIL WELLS

The Hercules Supply Store has good equipment and necessary supplies to meet any emergency of the driller. Helping the man in the field or the man in the office to meet his needs quickly and satisfactorily is the Hercules Supply Company's conception of service. Oil men are urged to use our stores regularly.

American Wire Lines - Lucey Rotary Products - Etna Tubular Products - Standard Seamless Tubular Goods - Guiberson Tubing Catchers and Swabs - Hughes Tool Co. Products - Baker Casing Shoe Products - Bettis Protectors - Walworth and Crane Valves. Hundreds of other lines and items in stock in every Hercules Store.

Stores: Merkel Pyote (Wink) General Offices, FORT WORTH *Borger Vernon (Grayback Crossing)*

XUM

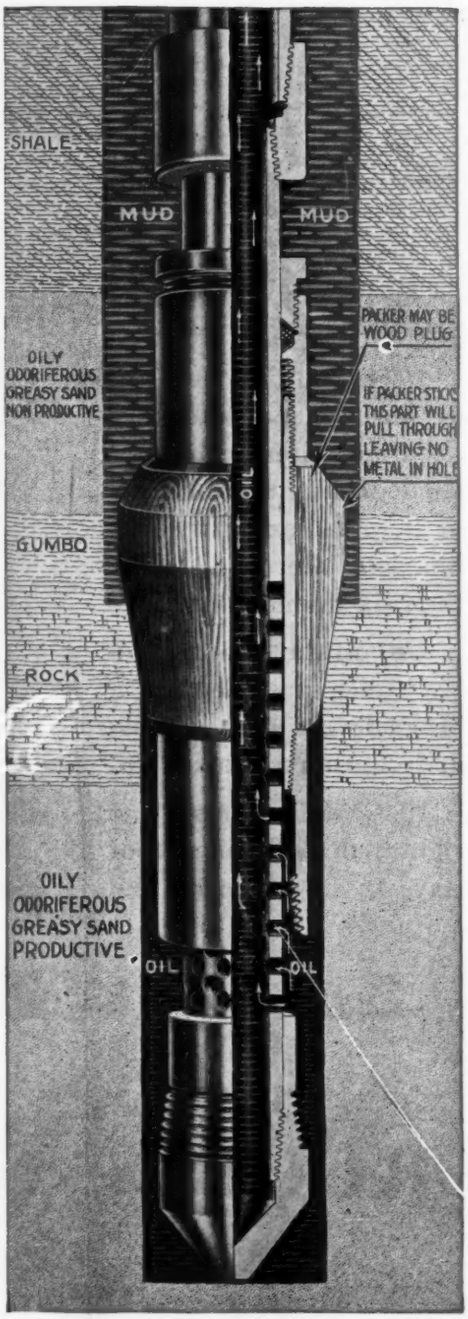
You would'nt buy an Apple Tree To get an Apple Pie–

Apple trees have roots, branches, twigs and leaves which are quite useful to the tree but of no interest to a person who is fond of Apple Pie.

Same way with a Flow Tester—all you want is a tool that will DO THE WORK—with the "extras" left off.

EDWARDS FLOW TESTER HAS

1. **Means for producing a vacuum in the sands being tested.**
2. **Means for agitating the fluid against the face of the formation being tested.**
3. **You can rotate during entire test. You want a sample and not a stuck pipe.**
4. **With the combination Packer that will make a test in rotten formation.**
5. **Perforated pipe covered going in well. You want a test and not a choke off.**
6. **No valves to stick in the Flow Tester. You know when the Flow Tester opens.**
7. **Metal parts of the Flow Tester no larger than the Drill Stem. You can drill smaller holes and save money.**
8. **Test in any "Rat Hole" 3⅛ inches or larger or in open hole 4⅛ inches or larger.**



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HOUSTON, TEXAS
P. O. Box 276
Preston 1927

Exclusive Export Distributors

W-K-M Company Inc.
HOUSTON, TEXAS
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New York, N. Y.

The PREFERENCE *of an old-timer*

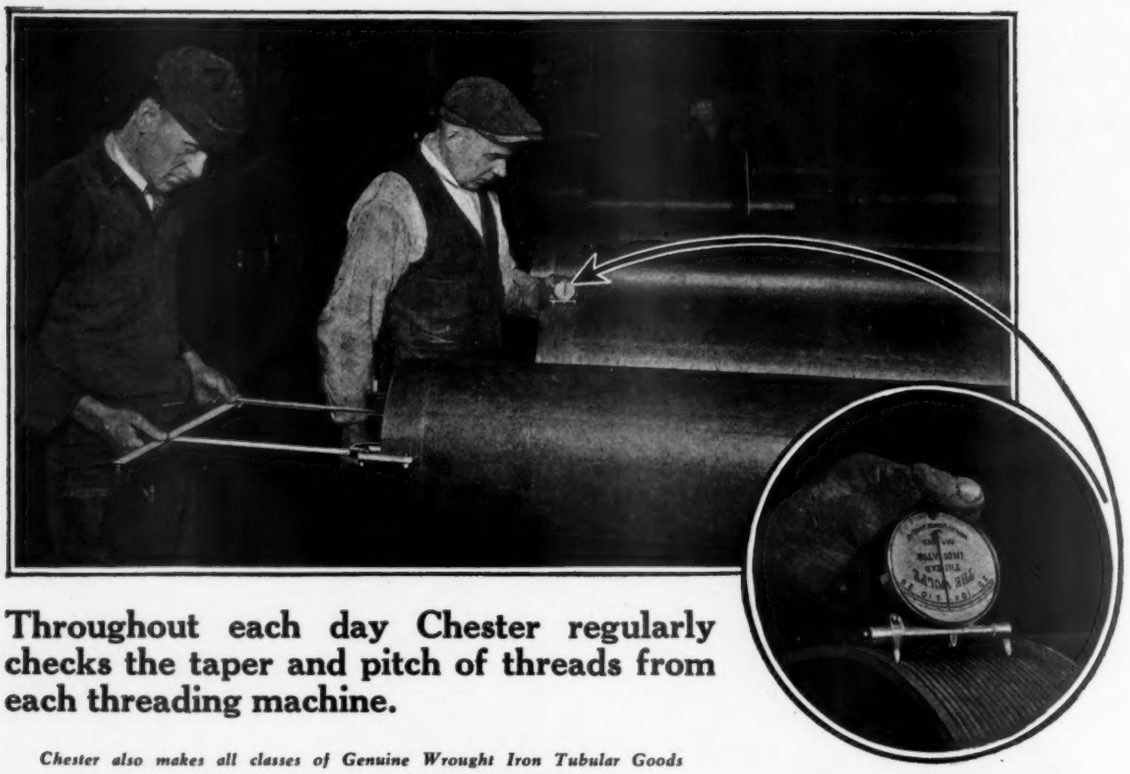
In Mission Pool, Seminole County, Okla., H. L. Ingram, one of the oldest active drillers (he is caught in this photograph reaching for the old weed) says: "I have drilled from coast to coast, in several countries of South America and in Old Mexico, . . . have had many fishing jobs . . . and I find that cheap jars do not pay."

He and the tool dresser, E. M. Pearson, look well satisfied over having Spang Weldless Jars on this job.

This well is being drilled by Mr. J. E. Mabee—one of the leading contractors in Oklahoma—who is using Spang Jars with every string of his tools.

SPANG & CO.
BUTLER PA.

Every length of Chester Casing, Pipe and Tubing must pass the Crop-End Test. Both crop ends are crushed and examined as an additional important physical test to check the character of weld and metal of each length of pipe.



Throughout each day Chester regularly checks the taper and pitch of threads from each threading machine.

Chester also makes all classes of Genuine Wrought Iron Tubular Goods

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STEEL CASING

LINE PIPE

ACME
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ROLLER BEARINGS

2
COMPLETELY ENCLOSED

SINCE the early days of Acme Steam Engines each year has seen new refinements and the achievement of greater dependability.

Today, Acmes embody the final major steps—roller bearing crankshafts and complete crankcase enclosure. The first step gives an amazing response of power at the slightest touch of the throttle. The second assures that every working part, as it runs in a bath of oil, will go through the severest service and still be good for more.

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Los Angeles, Calif.

TITUSVILLE
12"X12" ROLLER BEARING
STEAM ENGINES
383089

Edgar Allen

High Speed Carbon and Tool Steels

ALLEN'S
Imperial Major
A new high speed steel
(Label: Blue on Gold)

Widespread publicity was given recently by the daily and technical press to our new "wireless" (as the newspapers called it, not quite accurately) steel-making process, of which we are the pioneers. If we have delayed in making direct claims for the steels made by this process, it is because we wished to assure ourselves by tests and trials that our claims were justified, but it is now *definitely* proven that Edgar Allen tool steels made in the high frequency electric crucible furnace are *superior* to those made by the old crucible process or other processes. The explanation is simple.

(1) There is no contamination of the steel by gases, fuel or carbon electrodes. Sulphur and phosphorous, those deadly enemies of the steel-maker, are eliminated to a greater extent than has ever before been possible.

(2) Furthermore, there is a violent stirring of the molten metal electrically, which results in a thorough diffusion of the ingredients throughout the entire mass. This gives the steel greater homogeneity and avoids segregation.

These factors, with others that need not be mentioned here, have enabled us to put on the market a *new high speed steel*, new both in composition and process of manufacture, *nearly three times as efficient as an 18% tungsten high speed steel.*

The name of this steel is IMPERIAL MAJOR high speed steel. If your problem is to obtain maximum output from the most up-to-date machine tools, this steel, made by the new process, will solve it.

In order that you may test, without risk, the claims we make for this steel, we shall be pleased to supply it *on approval* and if same does not give satisfactory results, the steel can be returned, and the invoice will be cancelled.

Illustrated is a reproduction of the famous chart prepared by the Edgar Allen Steel Company, aided by the great research laboratories of the Sheffield plants. As a guide to tool makers in the use of Edgar Allen High Speed Carbon and Tool Steels. Upon request we will be glad to furnish you with one. Write us.

The chart tells the story..

The name *"Sheffield"* on High Speed Carbon and Tool Steels products of the Sheffield Mills of the Edgar Allen Steel Company, is world famous for quality. The chart helps illustrate the great care taken in the preparation of the hardening and forging temperatures to make these steels unexcelled for the special uses for which they were formulated. We invite the opportunity of discussing the possible uses of *"Sheffield"* Steels, with executives interested in the betterment of their products with regard to strength, durability and long life.

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THERE'S NO TWO WAYS

ABOUT THIS!

HERE'S the pipe—perfect—clean sharp threads—as good as skill can make it—*as it leaves the mill.*

But between the mill and you are hundreds of miles—crashing, crushing, shocks—dust, dirt, grit and grease.

How can the pipe reach you in perfect condition? Only a miracle could keep it unharmed and clean.

Put on Colona Thread Protectors at the Mill—they cover *all* the threads on pipe and couplings—they keep out all the dirt—every particle—the pipe reaches you just as it left the mill. Ready to join up—no cleaning—no re-threading—no delays.

If you buy pipe—insist on Colona Thread Protectors, available to every manufacturer—they will save you a great deal of trouble, as well as needless expense.

Colona Manufacturing Company
Pittsburgh, Pa.

COLONA

PIPE THREAD PROTECTORS

PATENTED

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The WORLD IS DEMANDING GREATER and GREATER EFFICIENCY,

The petroleum world is not only demanding greater and greater efficiency but is getting it in Jones H. M. Sucker Rods.

Since that early day in 1893 when Jones made and introduced the first steel sucker rods to replace the old wooden rods then in use, Jones has been steadily forging ahead with progressive improvements culminating in the world famous Jones High Manganese Steel Sucker Rods of today—proved by both field and laboratory tests to be the strongest, longest-lasting rods yet developed.

This high manganese steel, developed after years of constant research, is 10,000 to 40,000 pounds per square inch stronger in tensile strength and 50% to 400% greater in fatigue resistance than the steel ordinarily used in sucker rod manufacture.

That explains one convincing reason why Jones Sucker Rods are in preferred demand all over the petroleum world today—why you too should specify Jones in every sucker rod order.

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Made to API Specifications

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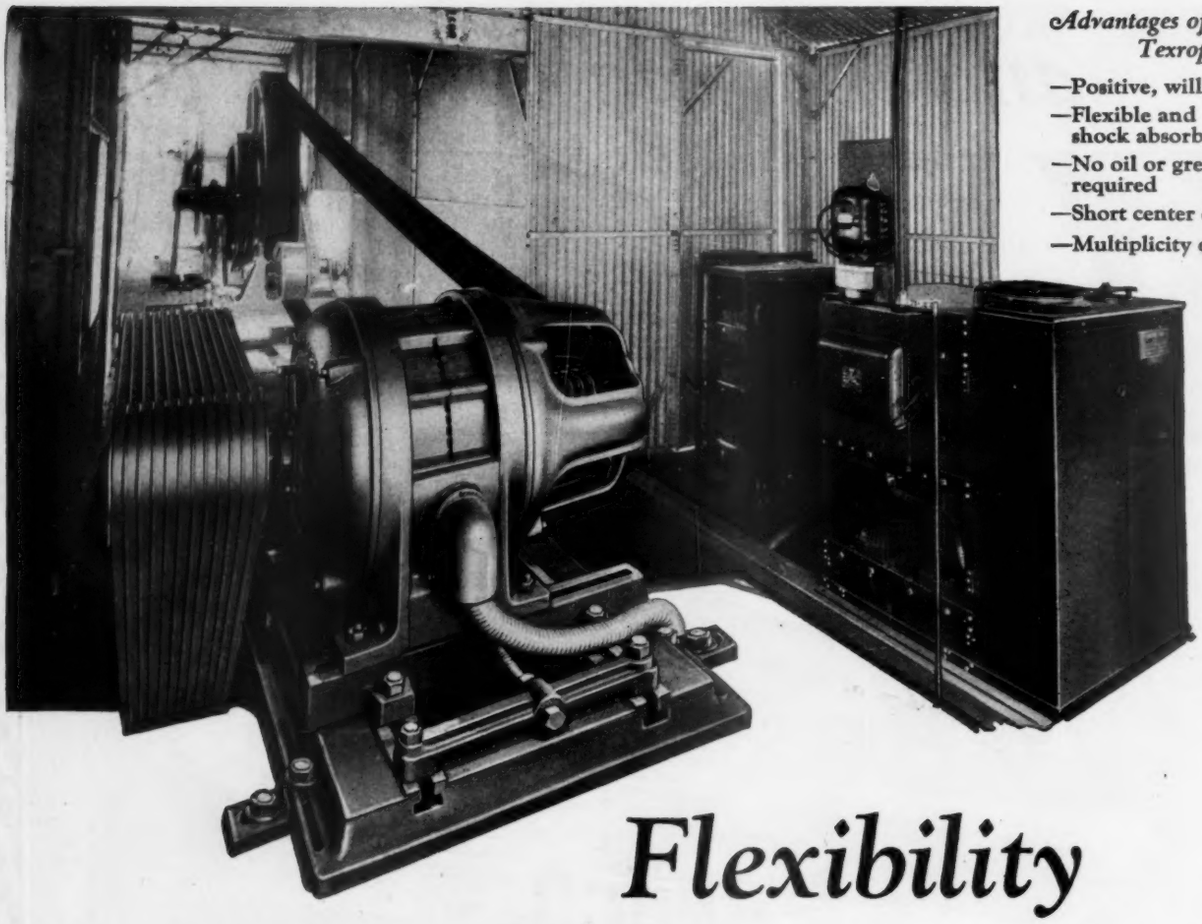

Advantages of Texrope Drives

—Positive, will not slip
—Flexible and shock absorbing
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—Short center operation
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for Cable Tool Drilling

—easily changed for producing

THIS Texrope driven single reduction unit is arranged for cable tool drilling. It is driven by a 25-65 h.p. Allis-Chalmers steel frame oil well motor regulated through control furnished by Allis-Chalmers. The control has 182 speed steps which gives very close speed adjustment. When this job is finished the drilling section of the control may be moved on to the next job and the motor and the reduction unit can be kept on the well for production.

Texropes provide a positive and flexible short center speed reducing drive requiring little care or adjustment. The countershaft is Timken equipped. Universal slide rails permit the use of any size or type of motor.

Allis-Chalmers motors are built with steel frames to give extra strength. The windings are dipped in insulating varnish and then baked three successive times to make them acid and moisture resisting. The combination Allis-Chalmers Motors and Texrope Drives provide dependable power that will stand up under your most severe conditions.

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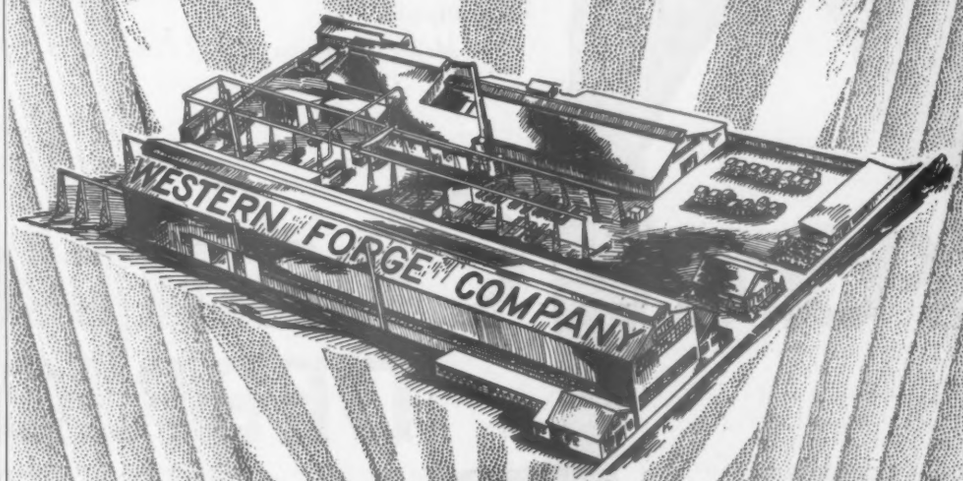
No. 3 of a series on the growth and development of the mighty chain of organizations bearing the EMSCO trade-mark.

Giant factory now building for Emsco Aircraft Corporation, backed and managed by a successful, progressive group of air-minded individuals. Designs by foremost aviation experts. Manufacturing and testing facilities to be unsurpassed. Planned world wide distribution.

FORGE EMSCO COMPANY



EMSCO AIRCRAFT CORPORATION
DOWNEY, CALIFORNIA

★*ACHIEVEMENT (Noun) A noteworthy and successful action or a distinguished feat. An escutcheon.* *(Heraldry)*

AMONG CHAMPIONS

LEG STRENGTH TELLS

Whether or not a derrick will bear the heavy loads of drilling depends primarily upon the legs. Super strength has been built into Moore Champion Derrick legs by the use of pipe sections of 40-50 carbon seamless steel. For column loading, the efficiency of this construction has no equal.

The Moore Champion Derrick Conforms to A. P. I. Standards.

THE Moore Champion DERRICK

LEE C. MOORE AND COMPANY, INC.

PITTSBURGH · TULSA

ESTABLISHED 1907

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Stocks in All Principal Fields

A Gulf Publishing Company Publication

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JUNE 21, 1929

Edited Weekly at Houston, Texas

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IT'S FROM "OILWELL"

Immediately available for any fishing job, no matter how exacting.

ANY KIND
ANY TIME
ANY WHERE

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Colorado Conferences Recesses For Further Study

Controversy between public land states and representatives of producing states with no power to act, brings about deadlock in meeting called by President Hoover. Tariff question injected by "independents" along with demand for repeal of government order.

By GRADY TRIPLETT
Staff Representative

COLORADO SPRINGS, Colo.—Other than future deliberation, upon the call of President Hoover, the conference of delegates from the oil producing states recessed here June 12 without definite result.

The end of deliberations here found the states of California, Texas and Oklahoma at odds with the governors of Kansas, Colorado, Wyoming and Montana. Governor C. M. Reed of Kansas offered a statement, to which the other governors werein accord, which would have given the conference a working basis.

Later representatives of Texas, Oklahoma and California offered a resolution, which involved a recess to allow further study, pending a second call by President Hoover. This resolution was adopted, for governors and representatives from the other states recognized the impossibility of further progress, without the support of the three major oil producing states.

Representatives of the four states charged those of the three states with "dissenting" from the views expressed in their statement. The charge of "dissention" was promptly denied, with statements that those from California, Texas and Oklahoma were in accord with some of the principles set forth in the statement presented by Governor Reed.

Following the disbanding of the conference, Chairman Mark L. Requa issued a formal statement in which he said the conference had "accomplished some very definite results."

On being questioned, Chairman Requa said he believed the three days at Colorado Springs had lessended the hostility toward the idea of a compact, so evident in some quarters when the delegates gathered. He mentioned Texas as a state which guarded its sovereign rights jealously, with others but little less apprehensive of any legislation through which states duties might be turned over to a commission, under federal regulation.

"I think," he added, "that is well understood now that a compact between the states and the federal government will not take away any authority now held by a state."

He said he did not know when the conference might again assembble at the call of the president but believed that there would be further deliberations. He returned to his home following the recess, to work in preparation for further deliberations.

In the absence of any definite result, other than the possibility of further deliberations, personal opinion as to the accomplishment of the three days would constitute the most voluminous report of proceedings.

One very definite condition hinges about the policy of administering development of the public land states. It was evident that the governors of these states would have gone deeply into the matter of a compact, provided they could assure modification of the order of the Department of the Interior, whereby development of public lands was restricted.

A section of the statement prepared by Governor Reed was as follows on this point:

"That in working out a national policy, due consideration should be given to all interests, including consideration of the situation in the so-called public land states as well as in those states in which oil development is being carried on from privately owned lands; and that present conditions justify consideration of the effect of Order 338 of the Department of the Interior to determine the advisability of substantial modification."

It should be borne in mind that the Reed statement was not adopted by the conferenece. In the preliminary conference of two days, Chairman Requa had ruled that departmental Order No. 338 had no place, since the meeting had not been called for the purpose of considering any actions of federal departments. But representatives of the public land states injected that order into

Final Statement of Chairman Requa at the Close of the Sessions

THE petroleum conference at Colorado Springs, called by President Hoover, accomplished some very definite results. In the first place, thanks to the wide newspaper publicity, it focused the eyes of the nation upon one of the most pressing and vital national industrial problems. During the conference a great deal of information was forthcoming that cannot help but be of great and lasting benefit. This was merely a preliminary conference. It was not expected that it would formulate any final and definite plan. That it did, however, secure the cooperation and support of the delegates is evidenced by the unanimous adoption of the resolution sponsored by the states of Texas, Oklahoma and California suggesting that further study of the problems would be desirable and that the conference recess subject to the future call of the President of the United States and urging that the governors of the oil producing states be then present with three delegates from each state.

In addition to this the governors of Kansas, Colorado, Wyoming and Montana presented a statement vigorously attacking waste and urging remedy. In view of the fact, however, that Texas, Oklahoma and California produce 85 per cent of the oil the four governors above mentioned were agreeable to vote for the resolution presented by the three states, merely asking that their views be inserted in the record. I think, in short, that the conference has accomplished all that could be expected of it and is a distinct step forward. It will undoubtedly be followed by another meeting and at that time some of the delegates of the various states will no doubt be prepared to suggest a very definite plan of procedure.

Resolution of Delegates of Texas, Oklahoma and California

THE official delegates from the States of Texas, California and Oklahoma, after a consultation among themselves instead of making a recommendation for immediate action believe that in view of the facts developed during the sessions of the conference, concerning the main objectives sought to be accomplished by it, and believing that a further study of the problems involved would likely attain better results, offer the following:

To continue the work of the conference of Governors called by the President and now in session, it is the judgment of the conference that a recess be taken subject to re-assembling upon call of the President of the United States. The governors of the several oil producing states are requested to be present upon such re-convening of the conference and that they each bring with them or send to the conferenece three official delegates.

Views of the Governors of Kansas, Colorado, Wyoming and Montana

TO continue the work begun by the conference of governors called by President Hoover and now in session, we deem it advisable that a representative or representatives not exceeding three in number from each of the oil producing states, to be designated by the governor of each state, and a representative or representatives of the government of the United States to be appointed by the President, constitute a commission to consider the entire subject of the conservation of oil and gas resources of the nation and make a report to the national and state governments with recommendations as to the general policy found to be proper, including both legislative and administrative action deemed advisable.

We request the representative to be appointed by the President to enter into correspondence with the governors of the various oil states with a view to making this resolution effective:

1. That in the development of a sound general policy, cooperation and coordination of States and national authority is not only desirable but essential.

2. That adequate regulation of production of methods in the several producing states and sections is highly desirable in the interest of avoiding watse and of reducing production costs and that so far as the organization of the several states will permit, uniform legislation should be enacted and uniform administrative regulation adopted.

3. That within the limits of practicability and sound policy, production should be limited to the economic necessities of any particular period or region.

4. That exploration for the purpose of locating additional oil supplies is not to be limited since no waste of the product is involved thereby. We declare information of the location and probable extent of such supplies to be of value in coping with the whole question.

5. That economical methods of controlling production from existing large pools and from those hereafter discovered should be devised and made effective.

6. That the commission should consider the extent to which the policies herein declared to be advisable can be made effective through compacts between the states and the extent to which national assistance through legislation and administration is necessary and advisable.

7. That in working out a national policy, due consideration should be given to all interests, including the situation in the so-called public land states as well as in those states in which oil development is being carried on from privately owned lands; and that present conditions justify consideration of the effect of order No. 338 of the Department of the Interior to determine the advisability of substantial modification.

8. A correct policy of conservation is that which will insure the use of this invaluable national resource to the whole people. That will give to the owner of the land where it is found the maximum recovery and will allow production, refining and marketing to be carried on at a minimum cost, keeping in mind that not only the immediate cost of production and present price to the consumer are involved but also the ultimate value of this resource to the nation as a whole.

proceedings more frequently than any other subject.

If what happened at Colorado Springs is indicative of what these states will demand in further deliberations, no compact looking toward oil conservation will ever find them entered, unless it contains provisions that will remove the possibility of development being halted by such orders.

As for the three major oil producing States, Texas and Oklahoma had men here under instructions to take no action that would obligate their governors. They were here simply to observe, to study and to report to their chief executives. Representatives from California were not so apprehensive of the idea of a compact but they still joined with Texas and Oklahoma in the resolution that brought the conference to a recess.

It seemed that the representatives of these states had made sufficient observations and study to convince them that they had something to report to their chief executives. Certainly they were through with this part of the conference when it reached any point which demanded a formal statement of position.

The matter of a tariff on oil importations carried over from the preliminary conference into that of the sub-committees in the form of a brief resolution by W. Scott Heywood, representative of Louisiana, as follows:

"We recognize that the oil situation has international as well as national aspects and that the importation of oil is a factor in the situation in this country, which must be considered in any policy dealing with the entire subject."

While the question of a tariff on oil found but this short paragraph in this final part of the conference, the subject was of more general interest than the plight of the public land states. The agitation in behalf of a tariff was the theme of the element which styled itself "independent." Producers from most of the states, royalty owners and land owners alike were in favor of a tariff consideration in solving the economic ills of the industry.

Thus it came about that two subjects, the action of the Department of the Interior and the tariff, were injected into deliberations, which it was desired to confine to economic matters.

An aftermath of the whole conference was the formation here of the Independent Petroleum Association of America. The object of its formation is to seek a tariff on petroleum imports and to bring about change in the administation of public lands, with regard to oil development.

Although the conference was called for the purpose of considering a compact between oil producing states and the federal government, very little consideration was given to a compact. Francis C. Wilson of Santa Fe, New Mexico, did speak on the general subject of compacts at the preliminary conference. He told the delegates that compacts are more common than is

generally known, and cited several, the most notable of which is the compact concerning the Colorado River. It was recently effected, after six weeks of deliberation.

There are several forms of compact. Since deliberations here did not reach a stage to allow consideration of a draft, just what proponents of this method have in mind is not known. Chairman Requa made it plain several times that he was not interested in what compact or other action finally resulted, as his primary interest was to change conditions within the petroleum industry.

In his final conference with writers re repeated:

"A new oil field is today looked upon as a calamity by the petroleum industry. What we want to accomplish is a change whereby a thousand new oil fields would be considered blessings."

Informal discussion of a possible compact for working such a change involved the naming of a commission, representing the several states, which might join in the movement. This commission would then administer the affairs of the industry on a plane common to all the states.

Any compact must first come out of action of the state legislatures. With their approval, it must have the approval of congress. The provisions of such a compact are thereby put on a parity with provisions of international law, so far as the supreme court of the United States is concerned.

Representatives of the states to the conference, which met June 11, after the preliminary conference, beginning June 10. These were the official delegates:

Texas: M. M. Crane, former attorney general; C. V. Terrell, member of the Railroad Commission; C. L. McCartney of Brownwood.

Oklahoma: J. Berry King, assistant attorney general; E. W. Marland, James A. Veasey, counsel of the Carter Oil Company; Pat Malloy of Tulsa.

California: F. C. Stevenot, state director of natural resources; W. S. Webb, attorney general; W. J. Carr, member of the railroad commission.

Kansas: Governor C. M. Reed, A. M. Landon, F. A. Pielsticker, Dana H. Kelsey.

Arkansas: J. W. Olvey; C. G. Murphey.

Louisiana: W. Scott Heywood, Jennings.

Pennsylvania: J. C. Tress, W. M. Irish and L. W. Young.

Montana: L. Dennis, Governor J. E. Erickson and C. J. Dousman.

Colorado: Robert E. Winbourn, attorney general; Governor W. H. Adams, J. T. Barnett and Robert D. Hawley.

Wyoming: Harry C. Emerson, C. M. Cox, William C. Wilson, B. B. Brooks and A. C. Campbell.

New Mexico: H. B. Woodward, Lieutenant governor; F. C. Wilson, H. R. Crile, B. C. Mossman and L. C. Staley.

Utah: W. R. Wallace.

"Independent Petroleum Association" Will Oppose Closing of Government Lands and Favor Tariff on Crude Oil

COLORADO SPRINGS.—An outgrowth of the conference here June 10 to consider an interstate compact on oil was the formation of Independent Petroleum Association of America. The conference regarding the compact developed heated opposition to Order No. 338 of the Department of the Interior, whereby public lands have been withdrawn from oil development. There was also evident a movement in favor of a tariff on oil importations.

This new organization has for its object the listing of oil on the tariff schedule and modification of the attitude of the Department of the Interior to again place the public lands within the scope of oil development similar to that enjoyed in states where practically all land is privately owned. The organization was formed the night of June 11 and perfected the following day. Wirt Franklin of Ardmore was chosen president. H. B. Fell, also of Ardmore, was elected executive vice-president. Miss Margie Montgomery, Amarillo, Texas, was elected a vice-president.

The plan of organization calls for a vice-president from each of the oil producing states. There will be two directors from each state, regardless of the amount of oil produced there, with an additional director for each 150,000 barrels of production, not including the first 150,000 barrels of daily output.

State Representatives

Vice-presidents elected here are: Texas, E. G. Bedford, Midland; Louisiana, W. Scott Heywood, Jennings; Oklahoma, R. D. Pine, Okmulgee; Utah, H. C. Conley, Green River; Arkansas, J. W. Olvey, El Dorado; Colorado, Dr. A. W. Green, Denver; Montana, C. J. Dousmann, Baker.

Vice-presidents for the other states will be selected after the organization has been perfected there. The vice-president from each state will be one of the directors.

Membership will be by individuals at $25 per year. Companies may take several memberships, but some individual must be named for each membership. The members will come from the following classes within the petroleum industry, independent producers, independent refiners, land owners, royalty owners, permit holders in the public land states, supply dealers, drilling contractors and intra-state pipe line companies.

The committee named to perfect the constitution and by-laws consists of H. B. Fell, J. W. Olvey, H. C. Conley, A. W. Green and Miss Margie Montgomery. Only a few provisions of the constitution could be set out here. The organization will have permanent headquarters at Tulsa. An assistant executive secretary will be selected to have charge of the office and conduct the business of the association. There will be an annual meeting.

Executive Committee

An executive committee, selected here, consists of Wirt Franklin, the president; Wade H. James, president of the Mid-Continent Royalty Owners Association; and R. D. Pine of Okmulgee, Oklahoma. This executive committee will be empowered to take actions, where immediate attention is essential. The board of directors, which will number about 50, will meet at the call of the president and a quorum will be determined by the number responding to a call.

This organization will not supplant any other organization among the several classes from which it will draw membership. Where there is a common ground for all these divisions, the work will be carried on through the new organization. It developed at the conference on the interstate compact that the independent element within the petroleum industry was in favor of a tariff on imported crude oil and petroleum products, as well as a common position with regard to the development of possible petroleum reserves within the public land states. So these two became the first efforts of the organization.

In Next Week's Issue

Jack Logan will review development at Barber's Hill from initial prospecting 25 years ago until the present. Work on this Coastal dome has been persistent with little encouragement until recently. The story is interesting as an epic of persistence, but has a greater significance in showing the possibilities of deep drilling in the Gulf Coast.

XUM

AUSTRALIA

Largest Continuous Non-Productive Area

Assiduously Searches for Oil

By M. E. A. DUNNICLIFF

ALTHOUGH oil has never been discovered in commercial quantities in Australia, the search for oil there is attracting wide attention, for the commonwealth is one of the largest continuous areas in the world that remains unproductive. This lack of fuel is being felt greatly in the Antipodes, which, in their isolated position, are peculiarly dependent upon the outside world for petroleum, as for other presumably non-indigenous materials. Motor transport is playing a big part in the development of the vast resources of the continent, and the provision of power for the country's 450,000-odd motor vehicles involves a huge import for a population of less than 6,250,000, amounting during the fiscal year ended June 30, last, to about $34,000,000 worth of gasoline and about $5,000,000 worth of lubricating oils.

These figures, in addition to explaining the eagerness of the Australian government to discover commercial oil, indicate what such discovery would mean to the United States producer. The commonwealth is one of America's best customers. Of course there would be a compensating gain; the loss suffered by the American producer in a measure would be picked up by the manufacturer of machinery and supplies. Australia necessarily would rely on America for the bulk of her field equipment. In the meantime, the work of the Australian governments, which are examining exhaustively every possibility of finding petroleum, assisting bonafide private concerns with subsidy and expert advice, and conducting independent investigations, is of more than passing interest.

Reward for Discovery

Prior to 1925 the federal government had offered a reward of $250,000 to the first person to discover oil in payable quantities in the commonwealth. Several of the state parliaments had also made offers,—South Australia, for example, promising $25,000 for the first production of 100,000 imperial gallons. These incentives, however, were not strong enough to encourage systematic research, and in 1926 the federal parliament withdrew its promised reward and passed the Petroleum Prospecting Act by which it allocated $300,000 for providing aid to companies engaged in search for oil, and to assist in geological survey work. This sum was quickly absorbed in helping companies in Western Australia and New South Wales and in carrying out surveys in Queensland and elsewhere. Last year the government appropriated a further $500,000 to continue its policy, at the same time appointing Dr. Walter G. Woolnough, an eminent Australian geologist, as its adviser. Under his direction it is pursuing vigorously its research policy.

Woolnough, in addition to having held professorial positions in Sydney (New South Wales) and Perth (Western Australia) universities, has had considerable field experience in the commonwealth searching not onlyfor oil but also for minerals and chemicals. Making the new federal capital, Canberra, his headquarters, he is visiting prospective fields throughout Australia and the territories, advising working companies and keeping government authorities in touch with progress.

Notable among others who have investigated oil prospects in Australia are Frederick Clapp of New York, and Dr. Arthur Wade, a prominent English petroleum geologist. The latter was for some time retained by the federal government to inquire into and report on the position. His report, presented to the senate in 1924, forms the basis upon which the petroleum prospecting activities of the government have been founded. It was generally unfavorable to the possibilities of finding commercial supplies of oil in northern portions of Western Australia or the Northern Territory, and pointed out that the marginal areas on the Fitzroy River and Price's Creek, Western Australia, appeared to offer the best prospects, although the structure in the latter locality was not satisfactory, according to the geological knowledge of the day.

Rosy Reports Discounted

There have been also any number of self-styled oil experts who have issued glowing reports. So many of these less responsible types of men have been unmasked, and the inaccuracy of their predictions proven, that the Australian investor, from sad experience in wildcat ventures, is wary of anything even savoring of oil. Not all oil men, he has found, are geniuses, even though they may claim to have come from America. The more reliable and prominent experts, to do them justice, have been mild in their optimism.

Apparently Australia is off the great oil belt. This well-defined zone, as Woolnough views it, follows the earth wrinkle or mountain area to which belong the Alps, the Carpathians, the Himalayas, the New Guinea, New Caledonia and New Zealand highlands, the Andes, and the Rockies. The world's great oil fields are almost exclusively developed along the more gently folded rocks which lie on the flanks of these lines of intense earth folding. About 70 per cent of the world's oil is recovered from rocks in this situation, the bulk of the remaining 30 per cent. being derived from the Mid-Continent and Appalachian fields of America.

The mountain girdle, which reaches its maximum development in the Himalayas, swings southward after passing

Late Operations in New Guinea

The New Guinea Oil Company's drill at Hohoro Dome, Vailala River, Papua, had reached a depth of 1353 feet in February when a flow of gas estimated at between 20,000,000 and 25,000,000 cubic feet a day was met. Gas was first struck at 1017 feet and gas and oil at intervals to the rest of the distance. Analysis showed the gas to contain 2½ gallons of oil per 1000 cubic feet.

Work was suspended temporarily owing to heavy mudstones forcing the formation up the well and preventing the setting of casing. For the same reason the company is considering removal to another site down on the fold of the anticline, but is awaiting geological examination before determining future policy.

The Anglo-Persian Oil Company, operating on behalf of the commonwealth government at Popo, some 60 miles to the east of the New Guinea Company's area, has met with similar difficulties and is concentrating on overcoming the same.

them, traverses the Malay Peninsular, and its axis then collapses. It is represented as broken fragments in the East Indies, but trending towards Australia it comes under the influence of the great continental mass. This acts like a knot in a piece of lumber, and the grain of the earth's crust bends around the obstacle and passes through New Guinea, the Solomon Islands, New Caledonia and New Zealand. But no trace of its presence so far has been found in the mainland of Australia. Marine rocks of the Miocene age, the natural home of oil in most countries, are developed extensively in New Guinea, the large island to the north of the mainland, but they scarcely appear on the continent. Australia is thus apparently "out in the cold" as far as Miocene oil is concerned.

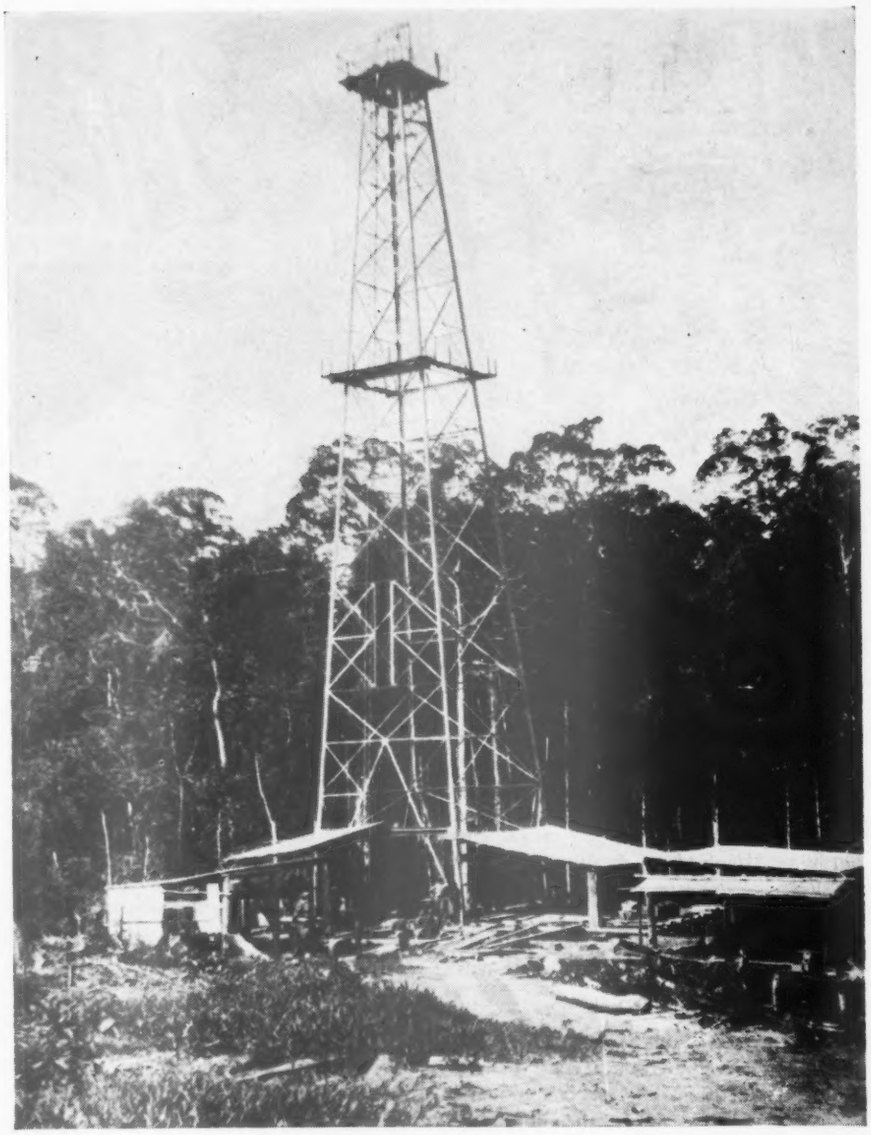
Indications of Oil

In the commonwealth itself, traces of petroleum, particularly in the form of natural gas, have been known for many years. These manifestations were met with 20 years ago in Queensland in connection with boring for artesian water, on which part of the country almost entirely relies. The most encouraging discovery in the history of oil in Australia was made last September when small quantities of the liquid were found in gas given off at Roma, Queensland. So far the production has been negligible, and the discovery is of interest rather than economic importance. The oil is very abnormal in its qualities, being almost pure natural kerosene. It is water-white in color and is being used as it comes from the bore to drive tractors and motor lorries. It is somewhat analagous to the "filtered" oil recovered in Alberta and is too heavy to drive automobiles. The proportion of oil to mixed (emulsion) varies slightly, but is generally about 10 per cent.

At the present time Queensland seems to offer the most favorable chances for discovering oil in quantities in the commonwealth. Prospecting activities are being carried on actively in the state despite the stringent provisions of the Petroleum Act, which the government was forced to provide in order to protect the public from unscrupulous company promotors. A number of companies have been registered, and while some of these are no doubt purely speculative, others are making a genuine bid for oil discovery. In instances they are working on most systematic lines and are putting down scout drills to prove the nature of the structures. In Queensland there is little indication of geological structure at the surface, the rocks being almost completely hidden by a small thickness of later formation. The formation in the central part of the state is similar to that of the Mid-Continental fields of America, except that the rocks are younger—Jurassic as against Permian and Mississippian.

Gas Encountered

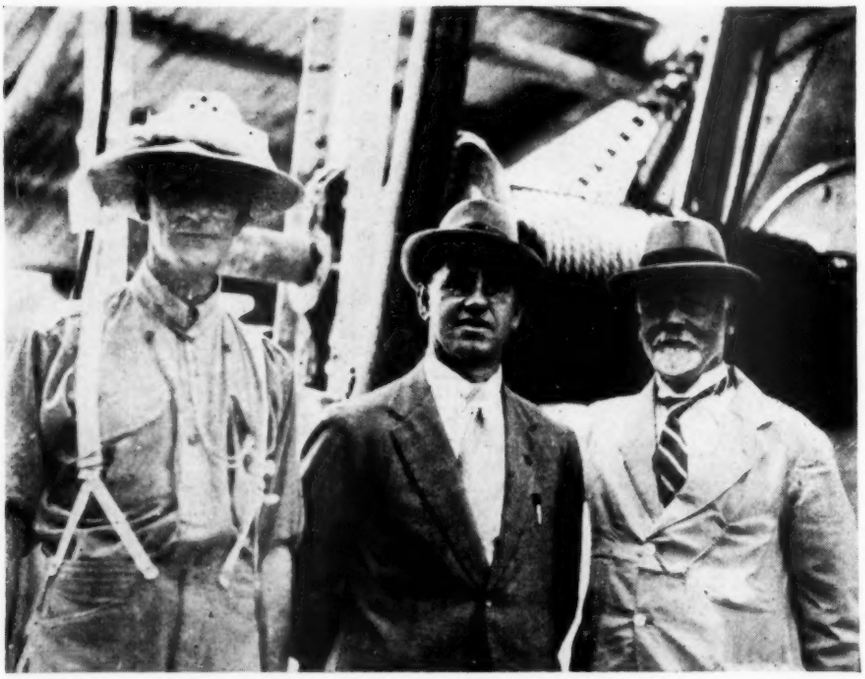
When gas flows were first encountered in boring for artesian water in Queensland, attempts were made to utilize the flow for lighting and heating purposes, but accident after accident happened to the bores. A certain degree of success was attained less than a year ago when the Roma Oil Corporation succeeded in bringing in a large well. Like that previously encountered, the gas in this well is petroliferous or "wet," containing about 1.2 pints of gasoline to every thousand cubic feet. The capacity of the bore has never been measured accurately, but it is considered probable that more than a million cubic feet issue a day.



New Guinea Oil Company's derrick, with American rotary drill, at Hohoro Dome, Vailala River, Papua

Small quantities of oil have been recovered from other water bores in Central Queensland, notably at Ruthven and Longreach. At the latter place a small amount of dark, heavy oil flows continuously with the water. Definite drilling, specifically for oil, however, has been confined practically to the so-called Lander "dome," about 35 miles north of Roma. Here three bores have been sunk and, although claims have been made of indications of oil, some doubt exists as to their character. Lander Oil Company had reached a depth of 3000 feet when a year ago it ceased work on one bore. Another met with obstructions and finally a flow of water, but the company is still operating on the third bore.

Conditions elsewhere in Australia are even less favorable to the discovery of oil than in Central Queensland. In Western Australia great hopes were cherished for the development of a field in the Kimberley division of the far north. At Mount Wayne, West Kimberley, the gas which bubbled freely from a hot spring was found to contain hydrocarbons. Indications of petroleum have been discovered in at least one bore in Kimberley itself, and in several bores at Price's Creek, about 100 miles southeast of Mount Wayne. Traces of mineral oil have been detected also in a seepage. In the eastern section of the division, black bitumen deposits, residual from an asphaltic oil, have been discovered in weathered basalt outcrops five miles apart, indicating the former circulation of petroleum in the area. Dr. Wade examined these regions and reported that there were promising features. Structures, he said, were not un-



At Roma, Queensland. Left to right: L. C. Bell, Queensland government geologist; Professor Richards, Queensland University, and Dr. G. Woolnough, head of the commonwealth government oil research bureau, with headquarters at Canberra, the federal capital.

favorable; but he was by no means encouraging. Hundreds of thousands of dollars have been spent on drilling in the locality, and the commonwealth government is now subsidizing further efforts so that the area may be thoroughly tested.

Kerosene Shale

Marine rocks of Tertiary age are widespread along the south coast of the continent, but they are devoid of any trace of suitable structure. For the most part they are horizontal, or nearly so, and none of the formations usually looked upon as essential, or at least desirable, have been observed. A certain amount of drilling has been done and large sums of money have been spent on wildcat ventures. Bitumen, similar to that found on the Californian coast, is from time to time washed up on South Australian beaches, leading to the belief that it was the product of some local terrestrial petroliferous area. Much prospecting has been done by private corporations, but the government experts are pessimistic. Drilling operations have long been in progress at Mount Gambier, near the Victorian border, and although extravagant claims have been made every now and again, nothing of importance has eventuated. A small amount of oil has been recovered from one bore in Gippsland, on the east coast of Victoria, but the formation in which it occurs is so unusual as to preclude any possibility of workable supplies.

In New South Wales deposits of kerosene shale, estimated at 40,000,000 tons, are located in the Blue Mountains about 100 miles from Sydney. But they are abnormal coals rather than petroleum products. In 1921, about $400,000 worth of kerosene was recovered from these deposits, but operations have ceased and profitable exploitation now depends upon the perfecting of economic means of production. The Commonwealth Council for Scientific and Industrial Research is dealing with the problem of commercial development of the shale. Claims have been made that prospects for petroleum discovery are bright in the Hunter River district to the north of Sydney. This hardly appears likely, however, as no part of Australia has been subjected to such detailed geological survey, and the locality is already riddled with coal mines and drill holes. Possibilities of striking a flow of oil in the Belford "dome" and associated structures of the district were for a time regarded as encouraging and the federal government offered to subsidize approved borings on a dollar for dollar basis to the extent of $125,000. A company with authorized capital of $5,000,000 proposed drilling as soon as equipment could be secured from America. But the state geologist reported that there was "nothing in the nature of evidence to justify the belief in the existence of commercial supplies of oil, or even gas, in the 'domes' under consideration." And hopes once again dashed to the ground.

While the search for oil is continuing on the mainland without encouragement of really favorable formations or even very definite or assuring results to date, the position is entirely different in New Guinea. Experts agree that the existence of oil there is practically certain, a belief shared by even the most disinterested persons. The mountain belt along which the greater number of the world's oil fields are situated passes in well-defined formation through the island. The Miocene rocks are not only present, but are twisted and bent into structures suitable to the concentration and conservation of oil.

New Guinea, an island of about 90,000 square miles, lies almost on the equator. Administratively it is divided into three sections, the northwestern section belonging to the Dutch, the southeastern portion, known as Papua or British New Guinea, being directly under the control of Australia, and the northwestern part, formerly German New Guinea, being under a mandate to the commonwealth.

As yet only parts of the island have been surveyed, large tracts of the territory, the home of savage head-hunting tribes, have never been explored. It was only in the early months of last year that the island was crossed for the first time, the intrepid explorers being two young government officers assisted by a party of native canoe-men and carriers. Despite the fact that so little of the land has been

(Continued on page 70)

Showing portion of the corduroy road, four and one-half miles from Vailala River, Papua, over which the New Guinea Oil Company had to drag its equipment through swamp and jungle to the Hohoro Dome site.

Oil Production *by* Gas Lift

By R. H. PENCE
Signal Engineering Company, Long Beach, California

A WELL taps an oil producing formation and forms a point of diminishing pressure toward which flows the oil and gas from the immediate and remote areas. The amount of oil flowing to the well is governed in some manner by the amount of variation between the pressure existing in the area surrounding the well and that pressure existing within the well. To remove the oil from the well is a problem of production. One method that is gaining reparly for accomplishing this removal is the gas lift.

GAS lift has been developed mightily within the recent past, and it can now be adapted to almost any production problem. On high fluid level wells of large production a continuous system of gas lift is best adaptable. On low fluid level wells with relatively small production the intermittent type has proven advantageous. The intermittent type combined with bottom chamber devices has proven itself adaptable to the smallest well. Many installations of this type have been made on wells that have produced less than 10 barrels per week.

The gas lift possesses many points of superiority in that it can be so handled that large amounts of oil can be produced and a greater ultimate recovery realized. Its capacity is only limited by the amount of oil that is capable of coming into the hole. It allows fewer interruptions of production, and thus maintains the well on production a greater percentage of the total time.

Where a natural gasoline extraction plant is operated in conjunction with the gas lift the recycling of the gas provides a handsome return from the gasoline extracted from the gas. In most cases this gasoline commands a higher price than if it were left in the oil, and, if credited to operation, leads to maximum economy in the lifting cost.

In many cases gas in such volume as is necessary to produce the well is unavailable. In such a case air may be substituted for the gas. There has been in the past much difference in opinion as to the relative efficiency of the lifting medium of air and gas. Webster's definition of gas is "an aeriform elastic fluid tending to expand indefinitely." Air, therefore, must be a gas. However, air is not nearly as soluble in oil as is gas, but in some ways this may be detrimental. When gas is compressed to a high pressure its volume shrinks greatly, and should a great portion of this diminished volume be dissolved in the oil there is little left of the original volume to do work with. Air being less soluble, there will be a greater portion of the original volume at a like pressure when in contact with oil. This argument is an old one, but from experience there has been found no essential difference where air or gas is used. However, the use of air makes it impossible in most cases to extract the gasoline from the mixed gasses coming from the well; therefore, gas will probably in the long run prove more profitable as a lifting medium.

In adapting the lift to a well it is customary to tube the well in such a way that oil may be raised to the surface either through the tubing or through the annular space between the tubing and the casing. No matter what manner of bottom arrangements may be employed, flow is induced by forcing the gas into one of the channels above named under appropriate pressure and sufficient volume. The gas so introduced becomes occluded or entrained in the oil and aerates the oil column, and in its effort to expand carries the oil to the surface.

Expansion of Gas

Since the oil is raised as the result of the expansion of the compressed gas, the manner in which gas expands is a matter of interest.

A given weight of gas in expanding from a high pressure to a lower pressure increases its volume. This volumetric increase, taking place against external resistance such as the pressure of a column of fluid, perform an amount of work which varies with the existing conditions. For gas to expand there must be an available supply of heat, either external or internal, to the expanding gas.

If conditions are such that heat is available in exactly the proportion as needed for the gas to expand, the temperature remains constant, and the process of expansion is said to be isothermal. If a conditions is such that no heat is received during the expansion of gas, heat is taken from the gas itself and the temperature of the gas falls during its expansion. This type of expansion is called adiabatic.

In practice, neither of these pure types of expansion exist. The actual expansion may approach either ideal type, depending upon the existing conditions. In a gas well where great volumes issue at high velocities the expansion may approach the adiabatic type, inasmuch as the gas travels so rapidly that it has insufficient time to absorb heat from the surrounding walls, and therefore expands at the cost of its own heat, causing a severe drop in temperature. In flowing oil wells the rate of travel of the gas upward may be relatively slow, allowing sufficient time for absorbing heat from the oil and the surrounding walls, permitting expansion to take place at nearly a constant temperature, thus approaching the isothermal type. The intermediate of these two types is called exponential, and represents any type betwixt the two ideals. Without going too deeply into the subject of expansion of gas we may briefly say that "when the volume of a mass of gas, V_1 (smallest volume) is allowed to increase to V_2 (largest volume), the pressure will regularly increase from P_1 to P_2; and experience has shown that no matter what the gas or the thermal conditions, if steady, the volumes and pressures will have the relation for the same mass, $P_1V_1^s = P_2V_2^s = K$, or the product of the pressure and the "s" power (the exponent) of the volume of a given mass will always be the same." [1]The exponent "s" may have any value but usually lies between 1 and 1.5 for conditions met in practice. For isothermal expansion "s" equals 1; for adiabatic expansion the value of "s" is the ratio of the specific heats of the gas. Thus "s" equals $\frac{C_p}{C_v}$. An average value of "s," that is used considerably for the expansion of gas, is 1.25.

A little figuring will show that if the expansion of the gas on its way to the surface in a well can be controlled very much less gas is needed if isothermal expansian can be attained. This is equivalent to saying that the mechanical efficiency may be improved.

We usually speak of the travel of this gas upward as its velocity; therefore, to control its velocity entails the correct proportioning of the area of its path. Hence correct area can control velocities approaching that desired.

Solubility of Gas in Oil

Much research has been done in the late past regarding the amount of gas dissolved in crude oil. The amount of natural gas that will dissolve in crude oil depends upon both the character of the gas and the character of the oil if other conditions are constant. Lighter gravity oils dissolve more gas than heavier oils, and usually wet gas is more soluble than dry gas.[2]

To express the amount of gas that a barrel of oil will dissolve follows closely

[1]Lucke's Engineering Thermodynamics.

[2]Bureau of Mines Serial No. 2732, 1-9-26 D. B. Dow and L. P. Calkins.

a formula developed for all gas and for al ois, as follows: Where

P = Gauge Pressure

V = cu. ft. Gas per barrel of Oil

P = 4.91V plus 3.01

Irrespective of the advantages of this dissolved gas in the oil, the amount of gas thus dissolved is actually latent as far as effective expansion energy is concerned at the moment. As the pressure is decreased as the flow travels upward the dissolved gas is released from solution, and thus the rate of flow is further accelerated.

This is another item that must be taken into account in controlling the rate of travel, or velocity.

Velocity and Slippage Explained

Velocity is a term meaning the rate of change of position. Hence if a mass changes its position a distance of 20 feet in one second, we say the velocity is 20 feet per second. Slippage is a term applied to the tendency of the gas to rise through the eductor[3] without corresponding movement of the oil—or, conversely, the tendency of the globules of oil to fall downward through the upward movement of the gas.

There are two conditions probably existing within an eductor when a lift is in operation. Gas may be occluded as bubbles within the oil, or the oil may be in droplet form within the gas. These two types exist according to the velocity within the eductor.

In the former case it has been stated that the average size bubble will slip through fluid under certain conditions at about the rate of 1.5 feet per second.[4] And in the latter case it is stated that a small globule of water (.03937 inches in diameter) will fall at the rate of approximately 14 feet per second through air with a density of one atmosphere.[5]

[3]Path of travel or discharge.
[4]Compressed Air Power, Daw, Pitman & Sons, P. 269.
[5]Benjamin Andrews, The Oil Weekly 12-9-27.

It appears that the percentage of slippage is dependent in some relation to the size of the bubble and globule and the velocity of flow through the eductor. Even though we cannot apply this data, because of the vast differences in physical properties of oils and gasses, it gives us some idea.

Velocities of existing lifts vary widely. Bottom velocities range from two to 40 feet per second, and discharge velocities range from 50 to 400 feet per second. In these lower bottom velocities the gas must be distributed as bubbles in the oil, but at the higher discharge velocities the oil must be distributed in the gas much as sand is distributed in a sand blast.

At relatively low velocities slippage must be great, and at high velocities slippage will be very small but the friction must be excessive. Therefore, if the velocity is so controlled throughout the range of the eductor it is conceivable that the oil could be evenly distributed throughout the length of the eductor. This would prevent overloading near the bottom, causing spasmodic surging and the formation of alternate plugs of gas and oil. It is obvious then that some velocity will give the best results for a specific condition. Therefore, it is only reasonable to assume that a well will perform best when tubed with reference to velocity.

It has been stated that a bottom velocity of 40 feet per second minimum, and a discharge velocity of 100 feet per second maximum, would effect maximum efficiency in the lift. However, it must be borne in mind that oil wells are not drilled and cased especially for the installation of the lift, nor are the proportions of the eductor always chosen for efficiency alone, but chiefly to attain the greatest revenue from the well. With this in mind any suitable velocity that will allow maximum revenue must be acceptable.

Calculation of Velocity

If unit volume of fluid flow through a tube of unit area in unit time, then by the formula—

$$\text{Velocity} = \frac{\dfrac{\text{Volume}}{\text{Time}}}{\text{Area}}$$

the velocity would be 1. If the volume were in cubic feet, and the area of the tube in square feet, and the time consideration in seconds, then the velocity would be in feet per second.

The velocity of flow of a mixed liquid and gas is determined in a like manner, as

$$\text{Velocity} = \frac{\dfrac{\text{Volume of fluid} + \text{volume of effective gas}}{\text{Time}}}{\text{Effective area of the eductor}}$$

The velocity in the ductor will increase from the bottom to the top if the effective area of the eductor remains the same, due to the continually expanding gas with diminished pressure.

Assuming the lift to be making constant production we may further assume that the same weight of oil and gas flows across every transverse section of the eductor per second, but at different velocities. Then by correcting the volume of the effective gas, and adding the volume of oil, the velocity at any pressure may be determined by the above formula.

Efficiency

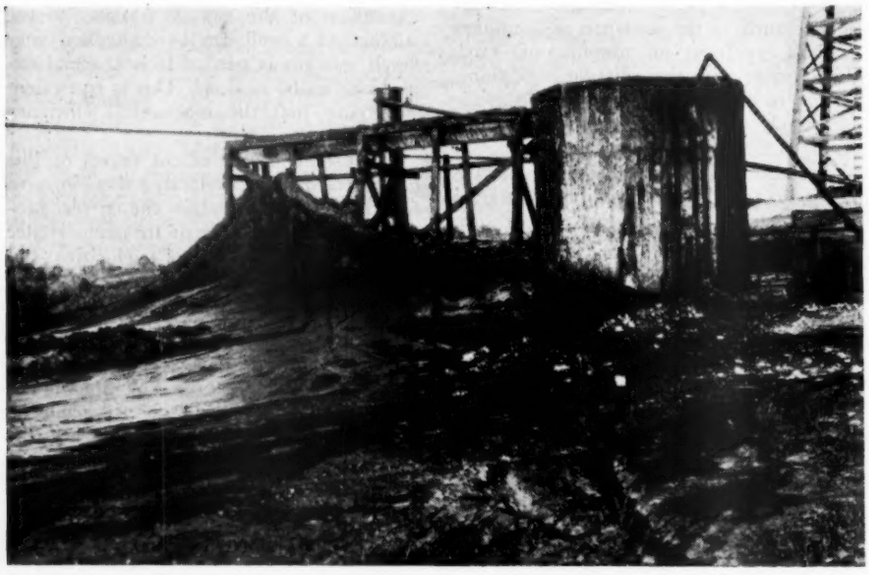
Efficiency is a polyphased term, and in connection with the lift needs spreading out. A better term would probably be effectiveness.

The efficiency of the lift, looked upon from the mechanical angle, means the ratio of the energy expanded in raising unit weight of fluid, compared to the energy necessary to raise the same unit under ideal conditions.

In many cases of lift operation there are forces at work over which no control is exercised. There may be collapsed casing, allowing insufficient submergence; the finish string may be too small; formation pressure may be low. There may be excessive formational gas from communicating sand, or high solubility of the formational gas in the oil under high pressure may be such that large amounts of gas are brought from the well by the very nature of affluence of the oil into the well. Any of these, or others, may cause a decided low mechanical efficiency, but the lift may still justify its installation or retention.

The ability of the lift to produce oil in the face of difficulties insurmountable by other methods has a far greater meaning than mechanical efficiency, and its capacity to increase the ultimate yield in capable hands offers still another definition.

A well being successfully handled by the lift is a well that since its adaption of the lift yields a greater monthly net revenue. No matter how this net revenue was increased, whether by reduced lifting costs, increased gas revenue, increased crude revenue, or decrease in personnel required to handle said well, the fact still remains that the well is producing a



Sand and shale produced on the intermittent gas lift from a California well

greater net revenue on the lift, and therefore it is a success.

Calculation of Mechanical Efficiency

As has been stated, the efficiency is the ratio of the work or power expended in raising a given weight to the work or power necessary to raise the same weight under ideal conditions, thus —

Per Cent. Efficiency =

$$\frac{\text{Total work lifting and accelerating total weight}}{\text{Total work in gas expanding through } P_1 \text{ to } P_2}$$

To better state our subject perhaps it would be well to explain some of the terms that are used.

Work may be defined as the product of the force by the distance through which it acts. The unit of force is taken as the weight of one pound and the foot is the unit of length. Then—

Work in foot pounds = weight in pounds x distance in feet.

The weight lifted is the sum of the weights of oil, water and gas.

As has been stated, the rate of flow from the bottom toward the top has been continually increasing, and we speak of this as acceleration, and it may be defined as the rate of change of velocity. The work performed in accelerating a body is the product of the resistance met by the distance covered while the velocity is being increased.

Again we will say, if the velocity is controlled to such that isothermal expansion of gas can be approximated we may calculate the amount of work contained in the gas as that liberated through isothermal expansion.

Any work done must equal the work expended, but the efficiency at which the lift operates is always less than 100 per cent. because of the friction and slippage factors.

All Factors Formulated

With all of the above items involved in the operation of the lift we will state a formula which is easily calculated, but from which we have omitted the details of the calculations.

$$\text{Log}_e\ P_1 = \frac{1}{E}\,\frac{(QW + V_a W^1)\left(H + \frac{S^2}{2g}\right)}{144\ P_2\ V_2} + \text{Log}_e\ P^2$$

Where $\log_e$ = logarithm to the base e.

E = efficiency of lift expressed in decimals.

Q = volume of fluid lifted per second in cubic feet.

W = weight in pounds of one cubic foot of fluid.

V_a = volume of gas at atmospheric pressure—cu. ft. per second.

W^1 = weight in pounds of one cu. ft. of gas at atmospheric pressure.

H = height of lift in feet.

S = velocity in feet per second at discharge.

g = acceleration of gravity in feet per second per second, equals 32.16.

P_1 = bottom pressure—pounds per square inch absolute.

A large header system for the gas lift operation of an entire tease

P_2 = discharge pressure—pounds per square inch absolute.

V_2 = volume of gas at P_2.

This equation has proved by experience to be arranged in the most comprehensive form, with the calculations involved, for installing a lift on any well. More will be said later relative to the use of the equation when data has been procured on a well in question.

From the above equation some interesting deductions may be made. Supposing the quantity

$$\frac{(OW + Va\ W^1)\left(H + \frac{S^2}{2g}\right)}{144\ P_2\ V_2}$$

and the quantity $\text{Log}_e\ P_2$

were to remain unchanged, that is, remain constant. This is to say that the volume of the fluid lifted, the volume of gas, the height of lift, the velocity of discharge, and the pressure at the discharge, will remain the same in a given well within limits. Then so long as they remain constant we may write.

$$\text{Log}_e\ P_1 = \frac{1}{E}\,K + C$$

and letting $X = \frac{1}{E}$

we will write $\text{Log}_e\ P_1 = KX + C$

which is a straight line equation where K is the slope of the line. Then, according to this equation, as $\frac{1}{E}$—increases $\log_e P_1$ increases; but to make $\frac{1}{E}$—increases E must decrease. Therefore, as E decreases $\log_e P_1$ increases, or as E increases $\log_e P_1$ increases, or as E increases $\log_e P_1$ decreases.

This is equivalent to saying that if we keep the above named factors of the lift constant we may vary the submergence to meet the variations of the efficiency. Of course this is limited by the bottom of the well and the permissible maximum pressure.

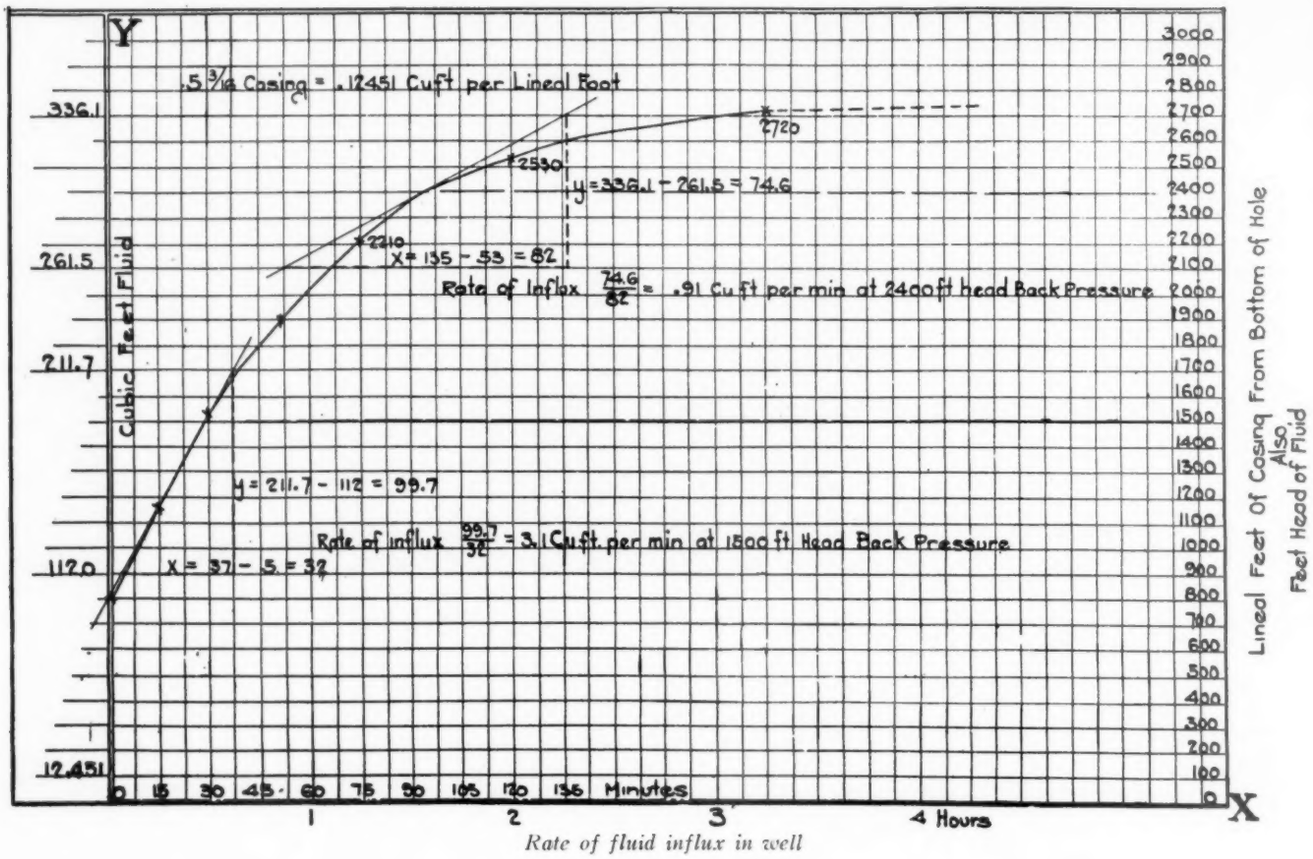
Adapting the Lift to the Well

In applying a lift there is always a purpose in view. The desired purpose may be increased daily oil production, increased oil recovery as distinct from daily oil production, increased gasoline revenue, cheaper lifting cost, or a means of producing oil incapable of being produced profitably with a plunger pump because of deep crooked holes or sand influx. There must be a clear distinction, so that the installation may be made with a purpose to accomplish.

Preliminary Survey

Of course it is necessary to know something about the well before attempting to install the lift. The more definite the information gathered the better can you approximate the true proportions of the lift.

1. The depth of the well and the depth of the producing formation. If more than one formation is producing, a clear idea should be had of the depth of the uppermost and the lowest.
2. The nature of the formation or formations should be known. This is to ascertain whether the formations are compact, or loose and shifting. This would give a definite idea of the sand influx, and to what degree the well may be roughed or abused in starting.
3. Definite knowledge should be had of the size and lengths of casings in the well. This will determine the area in which operation of the lift may be handled.
4. Mechanical condition of the well should be ascertained. Collapsed casing or liners sometimes do not permit free entry to the bottom of the hole but still allow the influx of oil. The casing may be badly corroded and in a leaky condition. Such conditions as these sometimes create serious obstacles.
5. Definite present and past production



Rate of fluid influx in well

information should be gathered. This will indicate the initial production, rate of decline, the nature of production, and whether water is present and to what degree, and in what manner it is coming into the well.

Definite information should be had of the various qualities of the oil and gas produced, such as gravity of the oil, and the temperature at which it is produced at the well head; the specific gravity of the gas, gasoline content, and its volume. Sometimes the temperature within the well itself is taken. This is accomplished by lowering a maximum reading thermometer to the face of the producing formation. Solubility of the gas in the oil is sometimes ascertained, but this is more or less too elemental as it can be estimated with fair accuracy.

6. Definite information of the formation present existing within the well and the condition required for maximum influx of oil should be ascertained. The more definite this information the more precise will be the manner of installation of the lift.

Formation Pressure

The formation pressure is understood to be that pressure existing within the formation at the face of the well when the well is standing dead. That is, it is supposed to be that pressure equivalent to a column of fluid accumulating in the well of its own accord after the well has been standing for some time with no gas issuing from the well.

It is understood that the influx of oil into the well from the formation is permitted only because there exists a differential between the pressure of the formation and the pressure in the well at the face of the formation.

Therefore, it is essential that the differential, or in other words, the pressure which might exist in the well opposite the producing formation, which will allow the greatest rate of production, should be determined. Bottom pressures are most usually determined by the height of a column of fluid existing above a given point. To determine the fluid level two general methods are employed: (1) a baler, and (2) pressure bombs. To attempt to determine the flow level with the baler will give misleading results, and sometimes cause complete failure. The use of the pressure bomb has been found through a great deal of experience to give close enough results to allow reasonable correctness.

Obviously, to determine the fluid level in a well at any one time would be useless and would lead to no good. But if a system were employed for determining the rate of rise of a fluid level much data could be determined. A practice of this nature will be outlined. Baling, or swabbing, the well to remove the fluid to as low a level as is possible is the first procedure. Then the fluid level is determined at known time intervals as it rises in the well. Plotting the data obtained, in a manner like that of the accompanying chart, it will be found that the volume of production will be shown simultaneously with the increasing pressure on the formation. Drawing a line through the points determined establishes a curve, the slope of which determines the rate of production. Therefore, a line drawn as a tangent to this curve at any point will give the rate of fill-up at that point of contact, together with the back pressure on the producing formation. The steepest line or tangent drawn to this curve will designate the maximum rate of production and the corresponding back pressure.

Knowing the maximum production and the pressure at which it is capable of coming into the well states a problem to which we must conform in order to actually gain this amount of fluid. If we are unable to reach the conditions set in a problem then we must abide by what we can get.

The Problem of Installing the Lift

We will assume a well to have been surveyed and the following data collected. For brevity we will consider the well as a unit, and assume it to be in perfect mechanical condition, that no water is present, and that there is but one compact producing information.

Depth—4000 feet.
Casing size—5 3/16 inches—20 pounds.
Gravity of the oil—30° A.P.I.
Rock pressure—1100 pounds.
Maximum rate of production—797 barrels per day.
Total back pressure for maximum production not to exceed 570 pounds gauge.
Static fluid level—2800 feet from bottom.
Working fluid level—1500 feet from bottom.
Lift—2500 feet.

Since maximum production is 797 bar-

rels per 24 hours, this production per second would be .051793 cubic feet. We will assume that P_2 (discharge pressure) is equal to P_a (atmospheric pressure); therefore V_2 equals V_a. We will assume the discharge velocity at the well head to be 100 feet per second. The specific gravity of the gas is .6; therefore the weight of one cubic foot is .076 (weight of one cubic foot of air) times 6, equals .045 pounds per cubic foot.

A three-inch tubing is about as large as would be advisable to run in this casing, and this has an area of .04657 square feet.

We will take this size tubing as a starter and do a little figuring. It will be necessary to determine the volume of gas necessary to create a velocity in this tubing at its top of 100 feet per second. Since V_2 equals SA-Q, where A represents the area of the path of discharge we will substitute, thus:

$V_2 = (100 \times .04657) - .051793$

$V_2 = 4.6052$ cu. ft. effective gas per second $= V_a$ or 398 Mcf. per 24 hours.

By substituting these quantities in the formula given, we have:

$$\text{Log}_e P_1 = \frac{1}{E} \frac{[(.051793 \times 54.697) + (4.6052 \times .045)]\ (2500 + \frac{100^2}{2g})}{144 \times 14.7 \times 4.6052} + 2.6879$$

$$= \frac{1}{E}\ .82882 + 2.6879$$

Now assigning assumed values for the efficiency E in the equation the following values of P_1 result.

E	$\log_e P_1$	P_1	P gauge	Submergence feet	Length of Educator feet
.27	5.7576	316.6	301.9	794	3294
.26	5.8757	356.3	341.6	899	3399
.25	6.0032	404.8	390.1	1027	3527
.24	6.1411	464.6	449.9	1184	3684
.23	6.2915	540.0	525.3	1382	3882
.22	6.4553	636.0	621.3	....	....

It will be seen that the bottom operating pressures come within the specification of our maximum pressure until 22 per cent. efficiency is reached, at which time a theoretic bottom pressure exceeds 570 pounds.

Figuring the bottom velocities it will be found that for 27 per cent. the approximate velocity is five feet per second, and for 23 per cent. efficiency approximated three feet per second, indicating that it would be extremely advisable, if this size tubing were chosen, to decrease the bottom area and thus increase the velocity.

Now suppose we try a little casing flow experiment. It is evident that too small a tubing for injecting the gas to the bottom of the well would create too large a loss in pressure between the well head and the bottom, and thus make for a loss of over-all efficiency. Two-inch tubing is about as small as is advisable under the circumstances, so we will try this size of tubing inside of the 5 3/16-inch casing. This combination results in a flow area of .09375 square feet. To determine the amount of gas necessary to maintain the velocity at the discharge of 100 feet per second we will again substitute in the equation $V_2 = SA - Q$

$V_2 = (100 \times .09375) - .051793$

$= 9.3232$ cu. ft. effective gas per second $= V_a$ or 806 Mcf. per 24 hours.

Now again substituting in the formula as given on page 29, we have

$$\text{Log}_e P_1 = \frac{1}{E} \frac{[(.051793 \times 54.697) + (9.3232 \times .045)]\ (2500 + \frac{100^2}{2g})}{144 \times 14.7 \times 9.3232} + \text{Log}_e 14.7$$

$$= \frac{1}{E}\ .137612 + 2.6879$$

Assigning assumed values for the efficiency E in the equation the following values of P_1 results:

E	$\log_e P_1$	P_1	P gauge	Submergence feet	Length of Educator feet
.25	4.4384	84.6	69.9	184	2684
.20	4.8760	131.1	116.4	306	2806
.15	5.6053	272.0	257.0	677	3177

This looks encouraging, inasumch as for 15 per cent. efficiency we can operate at a pressure approximating 260 pounds bottom pressure. Now we will determine the velocity at the bottom of the eductor. Solubility of the gas in oil must be considered here, therefore we will substitute in the average equation for solubility

$U = .0362P - .1$

where U is the cubic feet of free gas dissolved in one cubic foot of oil under gauge pressure P. The value of U for 25 per cent. efficiency is

$U = .0362P - .1$

$= 2.4$ cu. ft. free gas per cu. ft. of oil.

The velocity of flow at the bottom of the eductor is determined from the equation

$S_b =$

cu. ft. oil per second plus cu. ft. effective gas per second

area of eductor in square feet.

The volume of effective gas is determined by correcting quantity

$V_a - (U \times Q)$ from P_a to P_1, thus

$$V_1 = \frac{[V_a - (U \times Q)]\ P_a}{P_1}$$

Substituting we have the equation:

$$S_b = \frac{Q + \frac{[V_a - (U \times Q)]P_a}{P_1}}{A}$$

Substituting in this equation we have:

$$S_b = \frac{.051793 + \frac{[9.3232 - (2.4 \times .051793)]14.7}{84.6}}{.09375}$$

$= 15.5$ feet per second.

In like manner the 20 per cent. and 15 per cent. velocities are found, and amount to 11.4 feet and 5.6 feet per second, respectively. These velocities can be increased by increasing the size of the tubing at the bottom, thereby decreasing the area of the path of flow.

First choice would suggest the casing flow method in this case. However, this has some drawbacks inasmuch as the collars on the tubing, and the increased contact surface, in this method of flow causes a slightly lower efficiency than through tubing flow.

If the eductor were set on an assumed efficiency, and on trial does not operate at the calculated pressure, and is not produced at the calculated rate, it is because the assumed efficiency has been too high.

If the lift does not prove operative as per calculation, the pressure will increase, the feet of lift will be diminished, and the rate of influx oil will be diminished, because of the increased total back pressure on the sand. Therefore, an equalization of forces will take place under which the lift can operate. Such a condition is likely to arise after the first installation, and if such is the case the tubing may be lowered in order to gain additional operating pressure so that more work may be stored in the gas and thus offset the loss, and still maintain conditions of the problem. If the operating pressure for the new condition proves impracticable, or unattainable, then the flow area of the eductor may be changed.

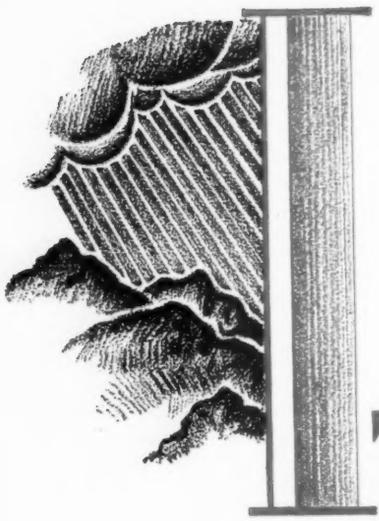
Remarks on Installation

Experience has shown that wells producing from differing formations require different manners of treatment. On those wells making large quantities of sand, and producing through tubing for an eductor, it has been found beneficial to tail the tubing to the bottom, or as near the bottom as is feasible, and cut ports in the tubing at the correct depth. The gas then is introduced into the ports and the majority of the oil is produced from the bottom of the tail. This system removes the sand from the well at the same rate as it comes in, and thus avoids the possibility of sanding up the well.

With this type of well it is advisable to have as much space as possible between the tubing and the oil string in order to avoid sand bridges.

It is also advisable to cause the least disturbance possible of the pressure equilibrium when starting the well, or "kicking over." To decrease the possibilities of surging, or heading, the well should be pinched in, or beaned, when first putting it on production. After the well has settled down for a period, much less care

(Continued on page 107)



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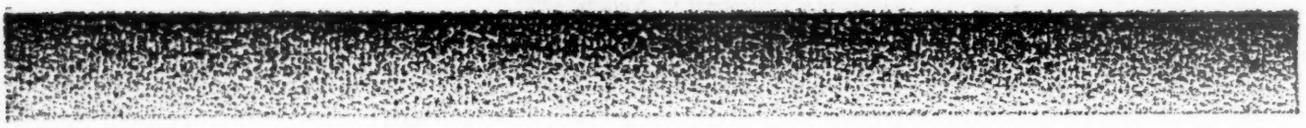

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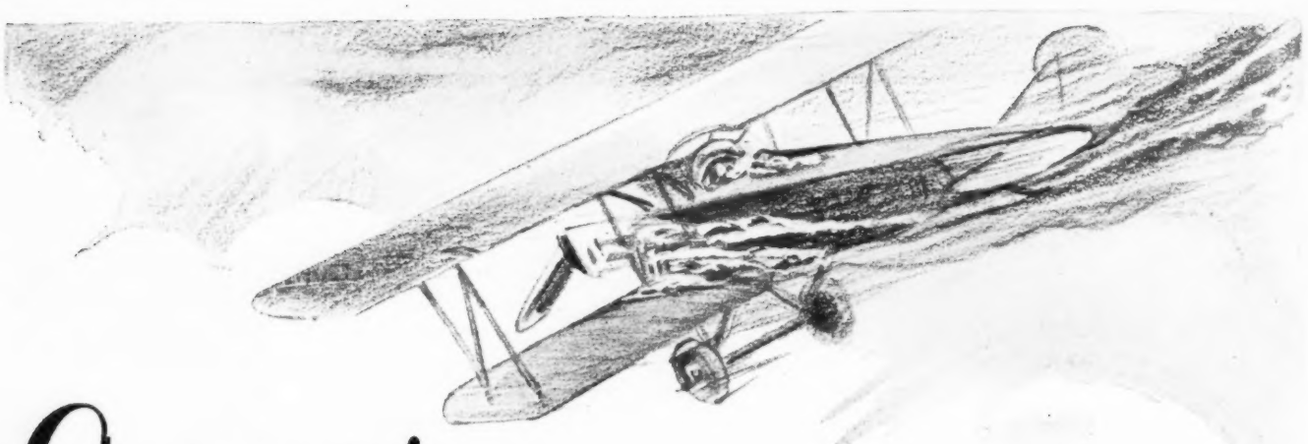

Concerning PARACHUTES *and* INJECTORS

THE aviator uses great care in selecting his parachute for he wants to feel certain that it will function properly when it is necessary to "go over the side."

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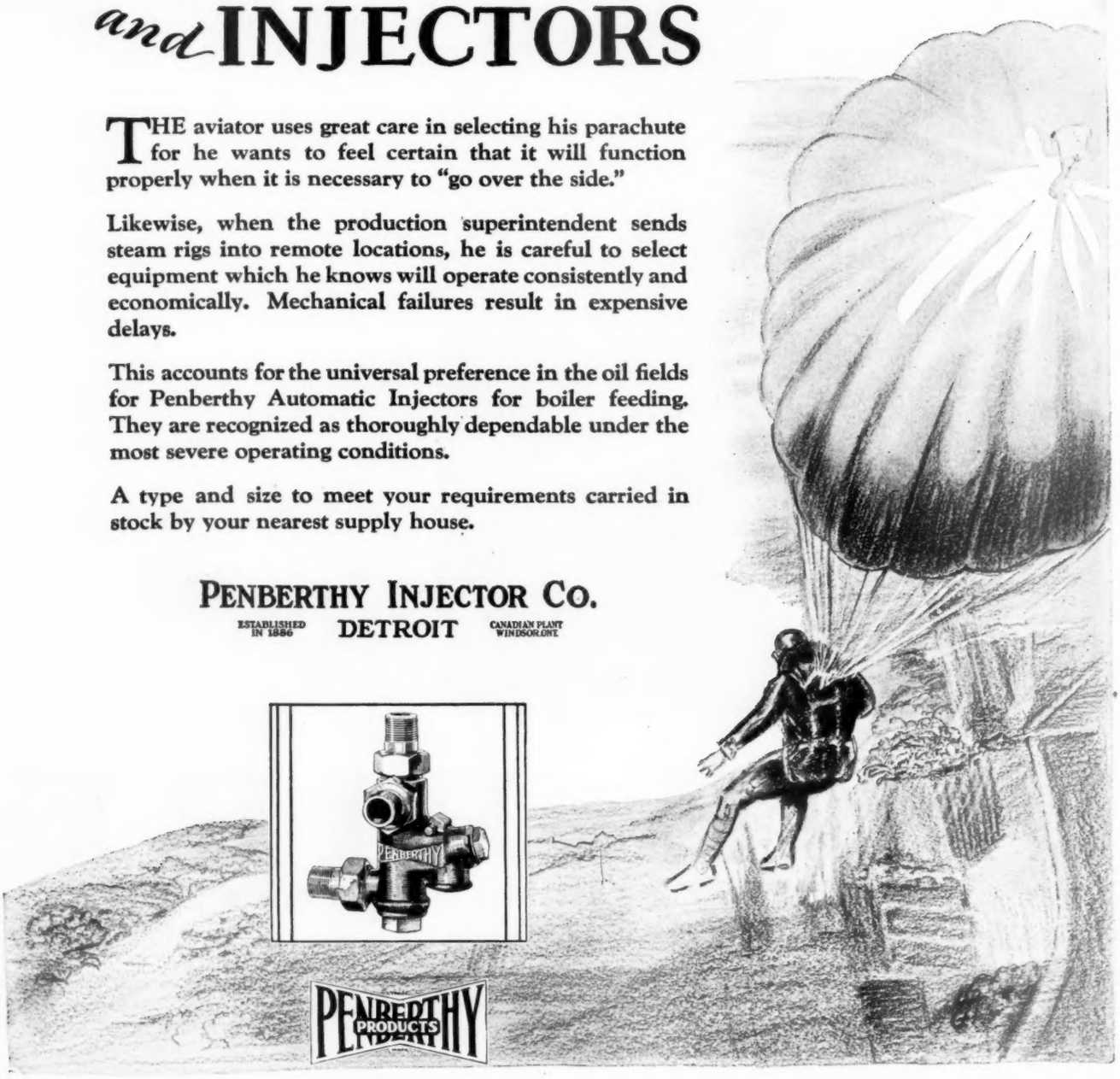
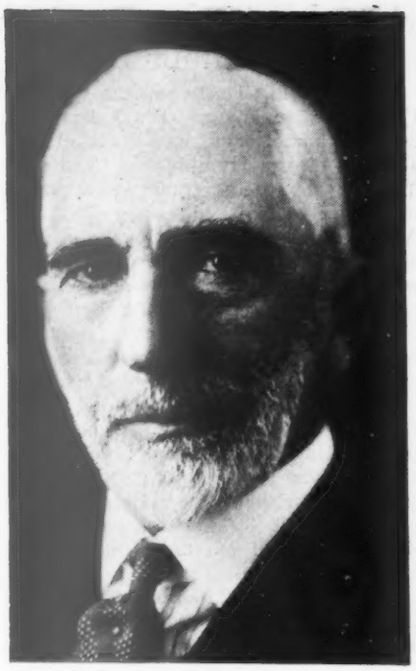


Governor Brooks *Has* Heard Conservation Plea Before

Western Victims of "Conservation of Natural Resources" Have Learned Much Since Roosevelt's Day. Who Can Blame Them for Lagging Enthusiasm in Cause?

By GRADY TRIPLETT
Staff Representative



B. B. BROOKS

FOR a mature impression of conservation, listen to the words of B. B. Brooks, ex-governor, frontiersman, oil producer and successful business executive in many other fields. It was the former governor of Wyoming, who brought to the conference in the interstate oil compact at Colorado Springs a message that left the delegates much food for deep reflection. He came as the representative of the Rocky Mountain Oil & Gas Association.

This effort to transfer his message is not complete as far as his words go, since it is a report from memory.

"Yesterday," he said, "we gathered to have a picture made. It brought to my mind another picture, which today hangs in my study at Casper. That picture was made 25 years ago and included the men who gathered at Washington at the call of Theodore Roosevelt. In it were such men as Andrew Carnegie, the great steel magnate; William Jennings Bryan, that noted political evangelist, and many others, now passed on.

"We thought little of oil then. We were considering all our natural resources. Coal and timber were the foremost of the products under consideration. Statisticians had calculated that another few years would see these products depleted. There would be no coal to keep the smoke curling from our smokestacks and no lumber for building our side walks.

"As many of the Eastern States had mined the most of their coal and cut great quantities of their timber, it was the Western States, which were singled out as places for conserving for the future these essential quantities.

Is Worry Necessary

"Results can be appreciated today. A great organization for the preservation of our timber has been built up and is maintained at Washington, with its forest rangers in our western preserves.

"But today when we bring a man into this country and say to him that we have sufficient coal in Wyoming and Colorado to last this nation for several decades, he is not startled and likely will say,

"'Well, what's it good for.'

"Or when we mention that the lumber reserves of this section are such that he can have ample material for building a home, he will reply.

"'What? Do you think I would jeopardize the lives of the members of my family with a house made of lumber?'

"As a matter of conservation, we have saved timber and coal but to what advantage? There are timber mills rotted and gone in these western states. And some with coal reserves and wondering when the time will come for mining it.

"Now, I am wondering about oil. I am looking ahead another 25 years and I wonder if by that time or earlier, we shall not be questioning ourselves as to why we were so concerned about our oil reserves.

"You know I have lived a long life and 50 years of it have been in the West. I should like to live another 50 years in the West.

"But in the time I have lived I have never seen the inventive genius of America baffled by any emergency. Coal we saved, and oil came along to replace it. Timber we saved and we have learned how to use other materials in building.

"Just recently, I had a visit from the superintendent of one of railroads at Casper. That man once bought fuel oil from one of my companies for his railroad. Recently his purchases have grown smaller and less frequent. His visit was an opportunity for me to ask him about buying more fuel oil.

"'Fuel oil,' he replied, 'Why, we got one of those oil electric locomotives here now and we'll soon have two more. We are preparing to go right on through Casper without taking on any fuel oil.'

"A minor incident, you may think. But to me it is significant of changes already coming. The inventive genius of America is not to remain idle, whether we use our oil or save it for the future.

"Far stranger things have happened than the possibility that we'll not be concerned about oil within 25 years from now.

"The prosperity of these Western States is linked with the development of our possible oil reserves. Another oil pool means another bond issue for our schools or another stretch of highway built, for part of the royalty goes to these purposes in the public land states.

"Let's not be whipped by the fear that our automobiles and our airplanes face a day of stillness when our oil is gone. The inventive genius of this country will keep us moving and the oil that is under our lands will bring us prosperity today."

Judge E. D. Reiter, chief counsel for Miley Oil Company and affiliated interests, has returned to Los Angeles after a trip by air to Washington and Oregon. He witnessed the graduation of two of his sons, one from the University of Oregon at Eugene, and another from Washington State University at Pullman. Judge Reiter is an enthusiastic flier and has earned a full-fledged pilot's license from the government in record time. He covered about 3000 miles during his recent trip, in 27 hours.

Posted Price To Be Paid For Half Million Barrels

San Angelo, Texas. — The Warner-Quinlan Company of Texas has sold 500,000 barrels of its West Texas storage oil to Humble Oil & Refining Company, at the gravity scale posted price, to be delivered during July and August via the Magnolia Pipe Line Company's system to Beaumont, where the oil will be loaded aboard tankers for Coastwise movement by Magnolia Petroleum Company, with the purchaser paying 52½ cents per barrel for transportation and tanker loading. It is understood that this oil will not be refined by Humble Oil & Refining Company, while the movement through Magnolia Pipe Line Company facilities is due to the company's having a contract with the Warner-Quinlan Company of Texas for the transportation to tidewater on all of its production and storage oil in West Texas.

Approximately 2,000,000 barrels of Church & Fields area storage oil was acquired by the Warner-Quinlan Company of Texas in May, 1928, through the purchase of three separate producing properties in the above field, and deliveries to Humble Oil & Refining Company are to be made from these stocks to the extent of 400,000 barrels during July and 100,000 barrels during August. Since this storage oil averages 30 gravity plus, it is netting the owner an average of 94 cents per barrel, or costing the purchaser $1.46½ f.o.b. tankers. The steel tanks are not involved in the deal.

An exceptionally heavy turnover of crude stocks in the West Texas district has taken place since the middle of March, 1929, as four major sales have been made involving about 3,718,000 barrels, including the above deal. The Texas Company purchased about 2,540,000 barrels of Hendrick field crude from Southern Pipe Line Company, and the Shell Petroleum Corporation bought about 436,000 barrels of similar crude from Cranfill & Reynolds, Inc., while the Atlantic Pipe Line Company purchased 242,000 barrels of storage oil from Independent Oil & Gas Company.

Activity Is Promised Soon in Western Oklahoma

Tulsa. — Western Oklahoma seems destined to get an intensive wildcat exploration play during the next few months. The recent crude price advance has done much to increase interest in the district.

Pure Oil Company is a company that has not been interested to any large extent in Western Oklahoma. It now has a geological field party detailing large portions of the area and checking geology.

Skelly Oil Company has a geological detail party working in the vicinity of Waynoka, in Woods County. Phillips Petroleum Company recently placed a field party at Fairview in Major County.

Indian Territory Illuminating Oil Company, which already holds vast acreage in Western Oklahoma, mostly in large blocks, is now reported buying checkerboarded royalties. This company is making it a practice to buy royalties where it has lease holdings.

Shreveport, La. — Announcement was made here Saturday by W. H. Buckley, head of the gas division of the Arkansas Natural Gas Corporation, that its subsidiary, the Arkansas-Louisiana Pipe Line Company, will begin immediate construction of one of the world's largest natural gas compressor stations at Sterlington, Louisiana, 20 miles from Monroe.

There will be a 10,000-horsepower unit which ultimately will be increased to 16,000-horsepower. A 35-acre site on the Ouachita River.

The compressor will be used in connection with the pipe line company's new 100-mile 20-inch line now under construction from Monroe to Shreveport. It will also be connected with the 16-inch line from Monroe to El Dorado, Arkansas, which was recently bought by the Arkansas Natural Gas Corporation. The compressor will be used to insure a high pressure all along the Shreveport and El Dorado gas lines.

M. J. C. Ferguson, vice president of the Republic Construction Company of New York, which has contract for the project, is at the site supervising preliminary work.

Magnolia Pipe Line Runs Reflect Oklahoma Production Decline

DALLAS, Texas.—Declining production in Oklahoma fields is reflected in a loss in pipe line runs made by Magnolia Pipe Line Company during May, and continued withdrawal from storage in that state, although of a small volume. This company's crude runs from various fields in Oklahoma, Texas, Arkansas, Louisiana and Kansas, exclusive of common carrier business, averaged 97,787 barrels daily during May, or 3776 barrels less than the average maintained in April.

Runs from Oklahoma averaged 48,531 barrels daily during May, or 3494 barrels under the daily average for the previous month. Magnolia Pipe Line Company made slight inroads on storage oil in Oklahoma during May, having withdrawn 6497 barrels for the month, leaving 9,849,110 barrels on hand at the close of the month.

The Luling district is Magnolia Pipe Line Company's principal source of controlled crude supply in Texas, and during May total runs were 309,792 barrels. Approximately this figure has been maintained for months, and is evidence of the steady output being maintained by the Luling field. Pipe line runs from various fields in Texas averaged 38,840 barrels, or an increase of 976 barrels, during May. These figures do not include heavy shipments handled from West Texas for other concerns.

Water shipments of crude oil from Beaumont docks to refining centers on the Atlantic Coast and foreign points reached a new peak during May when Magnolia Petroleum Company loaded 17 tankers and barges with a total of 1,143,370 barrels. Tanker shipments of refined oils aggregated 47,139,110 gallons, or a gain of about five million gallons over the previous months, while similar movement of fuel oil showed little change with a total of 6,044,887 gallons in May.

Total crude runs made by Magnolia Pipe Line Company, exclusive of common carrier business, from fields in Oklahoma, Texas, Louisiana, Arkansas and Kansas during April and May, 1929, follow:

	April Totals	May Totals
Wewoka-Cromwell	984,662	919,393
Healdton	220,321	216,513
Hewitt-Graham	146,748	150,874
Cushing	106,006	110,715
Seminole	59,164	63,947
Yale	43,853	43,032
Augusta (Kansas)	34,942	36,760
Total Oklahoma and Kansas	1,595,696	1,541,234
Luling District	304,635	309,792
Mirando District	144,810	181,902
Crane County	113,988	118,734
Roberts-Howard County (Deep)	75,214	70,573
Winkler County	103,897	117,526
Electra	90,733	90,675
Panhandle District	82,890	89,019
Burkburnett	65,318	67,776
Lockhart-Lytton Springs	33,997	34,644
Archer County	22,596	22,850
Mexia-Wortham	20,766	21,085
Desdemona-Comanche County	15,503	17,208
Iatan & Howard Co.	18,813	17,178
Corsicana-Powell	11,414	13,733
Corsicana (Heavy)	9,108	9,152
Ranger-Olden	9,088	9,010
Stephens County	8,752	8,373
Petrolia-Clay County	1,641	2,530
Panola County	1,709	1,304
Thrall-Williamson Co.	1,044	976
Total Texas	1,135,916	1,204,040
Rainbow	83,166	71,517
Smackover	72,206	70,331
El Dorado	10,751	9,700
East El Dorado	3,607	4,095
Total for Arkansas	169,730	155,643
Bull Bayou	41,509	38,394
Hackberry	51,305	32,464
Pine Island	31,423	30,671
Cotton Valley	18,455	22,254
Haynesville	2,859	6,707
Total Louisiana	145,551	130,490
Total for five states	3,046,893	3,031,407

PERSONAL MENTION-MEN YOU KNOW

Bert R. Emrick, technical director over drilling and production for the Burma Oil Company, Ltd., sailed from New York, June 14, for his headquarters at Burma, India, after having spent about three months making a study of drilling and production methods in the major fields of the United States.

Dave C. Stewart, vice-president Magnolia Pipe Line Company, Dallas, departed late last week, accompanied by his wife, for a vacation at Mt. Clemens, Michigan.

John Langston, chief scout for the Sun Oil Company, Dallas, was called to Russelville, Arkansas, late last week by the death of his father.

Pete S. Haury, petroleum engineer for the Simms Oil Company, has been transferred from Midland, Texas, to Shawnee, in connection with the company's recent oil strike and launching of a drilling campaign in the Asher pool.

M. E. Lombardi, director of Standard Oil Company of California with headquarters at San Francisco, arrived in West Texas late last week for an inspection tour of the producing properties of The California Company, a subsidiary, and was accompanied by Warner Clark, Dallas, manager of the southern district for the latter concern, and William Simpson, Midland, general superintendent.

Frank Book, head of the Book-Cadillac Hotel interests of Detroit, visited his oil holdings in Calgary, Montana and Northern Wyoming recently. Book believes that the wildcatting in Montana this year was probably more earnest and legitimate than at any time in the state's oil history.

Earl Chandler, who has been the Rocky Mountain representative for Axelson Machine Company, is to be transferred from his Casper headquarters to Tulsa, where he is to be made the assistant district manager. Milton Brennan, of Casper will take Chandler's place in the Rocky Mountains.

Warner S. Parker, formerly in the Long Beach office of the Oil Well Supply Company, has been transferred to the Los Angeles office of the company.

Dr. Austin D. Crile of Roswell, N. M., a prominent Republican, has been appointed by Governor Dillon as state land commissioner to succeed Benjamin F. Pankey, deceased.

Ralph Walkinstick, Seminole district scout for the Tidal Oil Company, is now president of the Mid-Continent Scouts and Land Men's Association. The change in the office resulted when R. P. Brewer, Jr., Barnsdall Company, was transferred from Wichita to San Antoio, which forced Brewer to resign. Walkinstick was elected first vice-president at the annual meeting held in Wichita a month ago.

Levi Smith, president of the Big Lake Oil Company and vice-president of the Plymouth Oil Company, both active producing units in the West Texas district, has purchased a new cabin-type monoplane to commute between field headquarters at Texon and his ranch in Southwest Texas, as well as an occasional flight to headquarters of the above companies at Pittsburgh.

Djevad Eyoub, geologist, has moved from Tampico, Mexico, to San Antonio, Texas. His address at San Antonio is 302 Furr Drive.

F. R. House, formerly with the Imperial Belting Company, has recently been appointed general field manager in the oil districts for the New York Rubber Corporation, according to A. H. Benson, Beacon, New York, assistant sales manager of the latter company.

Fred Thilenius has been appointed special representative of The Prescott Company, with headquarters at 1225 East 29th Street, Tulsa. He is succeeding F. H. Hayes, who is now located at the company's home office in Menominee, Michigan, as manager of the pump department.

N. W. Henderson has been oppointed manager of oil country sales for the Atlas-Imperial Diesel Engine Company of Oakland. Mr. Henderson will make his headquarters at 439 South San Pedro Street, Los Angeles.

NEW RICHFIELD OFFICERS

J. T. FRENCH

I. N. RANDALL

I. N. Randall and J. T. French have been appointed assistants to C. M. Fuller, president of Richfield Oil Company, with headquarters in Los Angeles.

Mr. Randall has been with the company since 1925 as branch manager at San Francisco, while Mr. French has been associated with Richfield since 1927, prior to which time he was with the Standard Oil Company of California at San Francisco, where he was engaged in general sales promotion work, particularly along the lines of educating the Richfield sales force and distributors in the proper use of lubricating oils, through lectures, which in addition to being given company employees were delivered to civic clubs, colleges, chambers of commerce, etc.

J. T. Scanlon will succeed Mr. Randall in the San Francisco office.

Walter B. Pyron, vice-president of the Western Gulf Oil Company, has returned to Los Angeles after a business trip to Texas fields.

Eugene W. Hough, vice-president and director of sales of the Naylor Spiral Pipe Company, Chicago, accompanied by L. S. ("Spider") Allan, Mid-Continent representative, were in Houston last week.

O. H. Attridge, chief engineer, Lucey Manufacturing Company, has returned to Chattanooga after an extended tour of California fields.

Roy E. Kohn, general manager of the Westcott Valve Company, East St. Louis, Illinois, was a visitor in Houston and the Gulf Coast country during the past week. In Houston he was accompanied by Larry Thomas, sales representative of the company. Mr. Kohn is well known to the oil men of the country he was visiting, through his former connection with the Continental Supply Company as he was for some time manager of the Dallas office of the latter. Later he was transferred to Pittsburgh, and some time ago was named general manager of the Westcott Valve Company with headquarters in East St. Louis.

BOOSTERS for the

4 SPEED EMSCO DRAW WORKS

TYPE "HRB"

Reading from left to right: Buster Wyatt, rough neck; Ellis Hamill, driller; Ike West, Continental Houston salesman; J. O. Mayfield, Continental Houston local manager; Curt G. Hamill, owner of the Hamill Drilling Co.; Claude Hamill, driller.

A Type "HRB" Emsco Draw Works is giving the Hamill Drilling Co. plenty of speed and power for its deepest drilling. Now being used on a well for the Pure Oil Co. at Pierce Junction, Texas, on the Herman Hospital Lease Well No. 1. This type machine was developed especially to meet the demand for a draw works with a large diameter and extra long spooling drum, to obtain greater service from wire lines.

"If Continental Sells It . . . There Is No Better"

THE CONTINENTAL SUPPLY CO.

General Offices: St. Louis.

London Offices: 316-17 Dashwood House, Old Broad Street, E. C. 2

ROLLER BEARING 3 SHAFT EXTRA LARGE SPOOLING DRUM

CONTINENTAL

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

California Solely Responsible for Rising Production

IF California could be eliminated as a factor in the general crude situation, improvement would be so pronounced that operators throughout the rest of the country would be receiving even better prices for their oil than prevail. This leads to the question: "What are we going to do about it?" The seriousness of overproduction in California is becoming acute, to the extent that a break in the crude market is becoming a threat that may have a far-reaching effect upon the industry nationally.

Last week the daily average production of crude east of California showed a decline of 1000 barrels, while the total for the United States showed an increase of 18,800 barrels. As anticipated, California registered another of its successive increases, this time amounting to 19,800 barrels. Overproduction in California is exhibited by increases registered in the leading fields last week, as follows:

Field	Barrels Increase
Santa Fe Springs.....	6,500
Long Beach	2,000
Huntington Beach	2,000
Torrance	500
Dominguez	700
Inglewood	500
Ventura Ave.	5,000
Seal Beach	3,000
Total	20,200
Elwood-Goleta decrease	400
Net increase	19,800

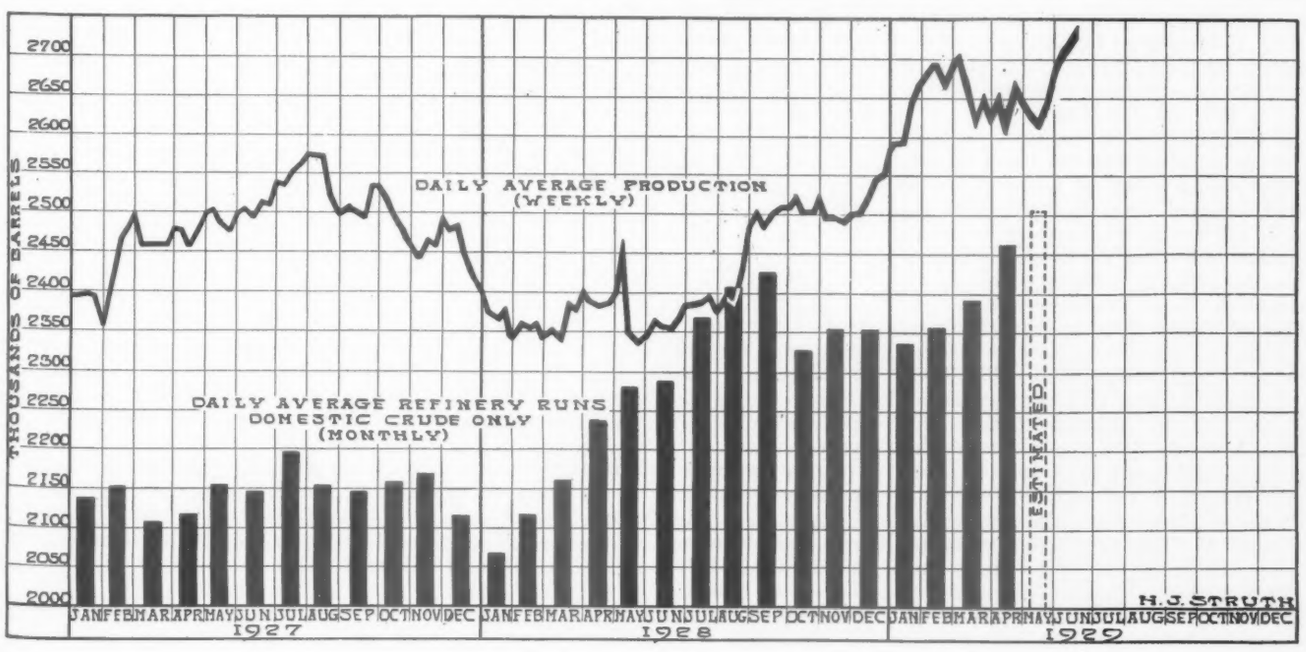
Apparently, efforts to curtail production in California have been abandoned — or perhaps the much talked of curtailment plan has not as yet reached the point where it can be classed as an effort. At any rate, results obtained make the effort appear feeble. It is claimed that about 75,000 barrels of oil is shut-in throughout the state. Increas-

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH AVERAGE OF 1928

	Daily Av'ge Year 1928 (Bureau of Mines Data)	Daily Av'ge June 15,1929 (A. P. I. Wkly Prod. Rept.)	Excess
Oklahoma-Kansas	786,585	795,500	8,915
Texas-Louisiana-Arkansas.	849,205	942,050	92,845
California	633,831	815,300	181,469
Balance of United States	190,391	190,400	9
Total United States....	2,460,012	2,743,250	283,238
Mexico-Central and South America	561,339	609,249[2]	47,910
Grand total	3,021,351	3,352,499	331,148

[2]As of March 30, 1929—latest date available.

DOMESTIC PRODUCTION AND REFINERY RUNS



Details on Critical Fields

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	Number Producing Wells	Daily Production Barrels	Daily Prod. Per Well	Rigs Up	Wells Drilling
WEST TEXAS—								
Hendrick	585	3,065,565	5,240	597	143,890	241[1]	4	21
Church & Fields	189	203,465	1,077	186	24,805	133	4	1
Gulf-McElroy	75	57,530	767	74	12,660	171	2	1
Yates	314	2,066,770	6,582	309	105,355	341[1]	2	13
Totals	1,163	5,393,330	4,637	1,166	286,710	246	12	36
TEXAS PANHANDLE:								
Gray County	378	208,570	552	365	50,800	139	44	65
OKLAHOMA—								
Seminole	2,035	2,376,407	1,167	1,578	281,701	178	20	116
St. Louis	449	417,048	928	362	87,764	242	19	46
CALIFORNIA—								
Santa Fe Springs[2]	218	747,000	3,427	127	196,000	1,543	23	201

[1]Production partially pinched.
[2]Includes deep zone production only. For field total add 214 wells and 24,000 bbls.

ing production figures would more logically make it appear that the lid was off in California. How much longer these operators will continue to burden the crude market with their excessive production is problematical, but unless some form of common sense pervades their ranks within the next few weeks, they will be forced to sell stored oil at lower prices.

Unfavorable Influence

California is exerting an unfavorable influence upon the general crude market. Increasing amounts of California oil are being dumped upon the market in competition with crudes produced in other areas of the United States. In fact, the situation in California can be likened somewhat to conditions that formerly existed in Mexico, when large quantities of flush Mexican oil were dumped upon the American market and caused American crude prices to crumble. If excessive production in California was merely of local influence, the industry could ignore it, but the fact that its influence is national and offers a threatening outlook for the immediate future of the industry makes it evident that something must be done to correct this evil influence.

In contrast with the situation in California, it is noted that Oklahoma production continues to decline. Last week losses were recorded in practically all of the oil pools throughout Oklahoma, resulting in a net decline for the state of 8350 barrels. In addition, declines were also recorded in Texas and Arkansas, making the total decline 9950 barrels. Increases in Kansas, Gulf Coast, North Louisiana, Eastern and Rocky Mountain States aggregated 8950 barrels, making the net decline east of California 1000 barrels. Thus, it is seen that conditions in practically all fields east of California show improvement.

Since production reached a new high level of 2,743,238 barrels last week, the country's excess over last year's daily average now stands at 283,238 barrels. Of this amount, California contributed an excess of 181,469 barrels. The fact that demand continues at a high rate, which is now said to be causing heavy withdrawals from crude storage, particularly throughout the Mid-Continent area, makes it evident that any constructive action to curb overproduction in California would have a most beneficial effect upon the general crude market. In fact, the key to more prosperous conditions is in the hands of California operators and with them rests the final solution of the industry's problem. For the good of the industry in California, as well as the industry in general, it is hoped that cooperative curtailment will not be delayed beyond the time required to make this year reflect the benefits of a record-breaking demand and enable the industry to enter 1930 in a better state of equilibrium.

Drilling Increases

Drilling operations in the United States showed an increase last week when 466 wells were completed, of which 282 were oil producers, with an initial production of 125,076 barrels. This was an increase of 100 wells, 99 oil wells and 31,551 barrels of new oil production. California contributed the largest quantity of new production, amounting to 53,400 barrels, followed by Texas, with 48,059 barrels. About 40 per cent. of the wells drilled in Texas were dry holes while only four per cent. of those drilled in California were dry. Increased drilling is mainly responsible for the present excessive production in California.

The market structure in California seems to be "on the fence," with a chance of falling either way. Several factors are working for a general improvement, but, on the other hand, there is unmistakably too much oil and it seems that something must be done to check over-production before a marked improvement will become a reality.

Optimism is still the keynote, but the bare facts do not support much enthusiasm. Curtailment has not accomplished the desired ends, although it must be admitted that it has helped some. Shut in production does not total more than 75,000 barrels, and some of this is being lost on the theory that the new gas saving law will have teeth enough to force curtailment.

State executives are working on an organization to enforce the new law where it is needed. The act became a law the moment the governor signed it, but it will require several weeks to place it in effect. There is much speculation concerning its effectiveness, with the belief that it will force a shut in predominating. It certainly should do no harm and any improvement will be reflected in better market conditions.

Santa Fe Springs Peak

Santa Fe Springs is showing no signs of a decline and with a new peak established it will remain in the critical class for many months. The O'Connell zone has developed into a real giant, free from water and with a gas pressure equal to any formation yet developed in the field. The largest wells are producing at practically their original rates and new producers are coming in with unusually large initial yields. The field average for the week was well above 215,000 barrels.

Long Beach is showing a slightly weaker tendency, but this field is not expected to yield much more ground without a rally. More than 100 wells are still drilling and new production should almost offset the natural decline for many weeks.

Figures on California stocks for May are not yet available, but it is believed that light oil stocks increased during the month. Production ran almost as high as during the previous month, while refinery runs were increased only slightly.

Gasoline sales in California are running ahead of 1928, with exports holding firm. The service station price has settled to 19½ cents, with a cheaper line available at 17½ cents. The cheap gasoline of several months ago has completely gone off the market. Fuel oil showed a stronger tendency for a time, but the local demand is slackening.

Oklahoma

Only two areas in Oklahoma remain at all likely to show any large increases in

production. These are the Oklahoma City field and the Pearson-St. Louis district. The story of the Oklahoma City pool will be told within a very short time as a number of tests are ready to drill in. Opinion is that production of the district is not likely to surpass 50,000 barrels daily —but that remains to be seen. Concensus of opinion on the Pearson-St. Louis district greatly differs. Many think that it will amount to little of nothing, while others are strong in the belief that Wilcox sand production will be found somewhere in the big area beneath the present producing horizons.

Of principal interest last week was the passing of the Asher field from the picture. The pool is pretty well defined to a very small area with a covering of less than 10,000 barrels daily. Performance of the producing wells does not look good as they are declining rapidly, so Asher may be dismissed as a possible major field.

The output of the Seminole district continues to decline. A drop of more than 100 barrels is shown in the daily average recovery per well this week against last week.

It is hard to say just what the actual market for U. S. Motor gasoline in Group 3 actually is. Most of the major companies continue to hold to 9¼ cents a gallon, but there is some distress stuff on the market for immediate delivery at cheaper prices.

Kerosene is meeting with a fair demand all over the country and is holding its price. The general market for 41-43 water white is six cents in the Oklahoma area.

Sorely in need of shipping instructions to cover gasoline now being manufactured in their North Texas plants, refiners as a whole in the district are finding themselves in a tight position, with gasoline prices sagging as the heaviest consuming season of the year approaches, independent refiners have not fared well since crude prices were advanced May 20. Jobbers and brokers stocked up on gasoline ahead of schedule on June requirements, and the temporary price of nine cents per gallon on U. S. motor gasoline failed to stick. Current sales on this commodity range from eight to eight and one-quarter cents per gallon, but the movement is slow, and stocks are piling up to further complicate matters for the small plant owners. The fuel oil market in the North Texas district is somewhat steady, with quotations in the Wichita Falls refining center ranging from 60 to 70 cents per barrel.

Flush production coming from new completions in Gray County section of the Texas Panhandle is materially boosting the supply of high gravity oil, as this county climbed to a new peak of 50,800 barrels on daily average production last week.

In the West Texas district, crude buyers continue very active, and last week Humble Oil & Refining Company contracted for the purchase of one-half million barrels of Crane County stored oil from the Warner-Quinlan Company of Texas, paying gravity scale prices in the tanks.

Phillips to Have Export Terminal at Houston

Houston.—Phillips Petroleum Company of Bartlesville, Oklahoma, soon will begin construction on a gasoline refractionating plant on the Houston Ship Channel which will have a capacity of from 12,000 to 15,000 barrels per day. Immediate construction work will be devoted toward completion of a terminal on the site; facilities of the Crown Central Petroleum Company will be used until such construction is finished.

The site chosen for Phillips Petroleum Company's plant is a 50-acre tract, fronting 950 feet on the south side of the channel, adjacent to the Crown Central Petroleum Company's refinery on one side and near the plant of Horton and Horton. Rail facilities will be provided by the Public Belt Railway in order to take care of incoming equipment and raw materials, giving the plant both a water and rail terminus.

Material for construction of the plant has been ordered, and some of it, having already been shipped, is due in Houston in a few days. In addition to plant equipment proper, Phillips Petroleum Company has placed an order with the Chicago Bridge & Iron Works for immediate erection of an 80,000-barrel tank on the property. This tank will be shipped from Oklahoma. From the factory of the above concern, a 25,000-barrel tank will be shipped. Both tanks will be equipped with Wiggins breather roofs and will be used for storing natural gasoline stocks expected to accumulate here before the plant can be put into operation. Construction work will be under direction of F. E. Rice, general superintendent of the gasoline department of Phillips Petroleum Company.

Negotiations for the tract of ground were closed by M. T. Kirk and W. B. Lerch, special representatives of the Phillips organization.

Wichita, Kansas. — Phillips Petroleum Company, Bartlesville, Oklahoma, has purchased an 82-acre refinery site at Wichita. No definite date has been named on which construction of this plant will start. Phillips Petroleum Company has crude production now in one or two Kansas fields near here and in view of its growing marketing business as well as its crude oil production, a refinery at this point will be strategically located. The company has recently completed installation of a 1000-barrel cracking unit at Borger, Texas.

Shipley Pool Has Ample Pipe Line Facilities

Midland, Texas. — Shipley pool in southeastern Ward County, where 36 degree gravity oil is found at a semi-shallow depth, is to be well fortified with pipe line facilities as the Atlantic Pipe Line Company started work early last week on laying a six-inch carrier to the pool, while later in the week construction work was completed on a new four-inch line built by the Wickett Refining Company and the Bluebonnett Oil & Refining Company to their plants at Wickett, Texas. Although the combined capacity of these two carriers will be between 15,000 and 18,000 barrels daily, the five completed wells in Shipley pool are only making about 685 barrels daily.

Atlantic Pipe Line Company has assembled 17 miles of pipe to extend southeast from the SE¼ of SW¼ Sectin 60, block "F", G&MMB&A Survey, Ward County, in a straight route to the heart of Shipley pool, near the center of section 17, block 5, H&TC survey, using the eight-inch tank car loading line bought last June from Independent Oil & Gas Company to deliver the oil to its Hendrick field station, thence to the Gulf Coast through a 10-inch trunk line. Atlantic Pipe Line Company will handle the oil produced on a 50-50 basis by Atlantic Oil Producing Company and the Delmar Oil Company from two wells, making 350 barrels daily in the Shipley pool. The refining interests at Wickett have not completed organization of a pipe line concern to operate their line, which will run the oil produced by the Shipley Oil Corporation and J-H-L Oil Company on a three year contract. O. H. Berryman is superintendent in charge of the line.

The Wickett refining interests are reported to have contracted for Shipley pool production on a basis of 40 cents per barrel below the Mid-Continent gravity scale posting of 36 degrees oil by the Prairie Oil & Gas Company before the revision of crude prices May 20, such being a bonus of 15 cents per barrel. However, the new gravity scale prices in West Texas reverses things around, and the Shipley pool producers are penalized 13 cents per barrel by receiving $1.05 per barrel for their 36 degree gravity oil in accordance of terms of contract, while the West Texas price posting on this grade of crude is $1.18 per barrel.

Ellis County

Tulsa. — Phillips Petroleum Company et al's Sophus 1, SW NE Section 9-13-19w, Ellis County, Western Kansas, has opened up another new field in that area. Total depth of the well is 3595 feet, in the Oswald lime 120 feet. The well filled up 600 feet immediately and in three hours had filled up 2500 feet. It is estimated good for 500 barrels.

Several companies including Barnsdall Oil Company, The Texas Company, Independent Oil & Gas Company, Shaffer Oil & Refining Company, Derby Oil Company and Mid-Kansas Oil & Gas Company own acreage in the block beside the 4000 acres held by Phillips Petroleum Company.

This is the third pool opened by Phillips Petroleum Company this year, two in Western Kansas and one in western Pecos County, Texas. The other Kansas discovery was on a 10,000-acre block in Township 12-17w, Ellis County, and 12 miles northeast of the new discovery.

XUM

CRUDE OIL PRICE QUOTATIONS

Revised June 18, 1929

EASTERN STATES
(Effective March 12, 1929)

Penna Grade Oil in New York Transit Lines (New York)	$4.10
Brandford District Oil in National Transit Lines (Pennsylvania)	4.10
Penna Grade Oil in National Transit Lines (Pennsylvania)	4.00
Penna Crude Oil in Southwest Pennsylvania Lines (West Virginia)	4.00
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.85
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.35
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.80
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s lines	1.75
Somerset Oil in Cumberland Pipe Line lines (Kentucky)	1.50
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (Effective Jan. 29, 1929)	.60
Keister (Pennsylvania)	1.20

CENTRAL STATES
(Effective May 21, 1929)
Posted by Ohio Oil Co.

Illinois	1.75
Indiana	1.57
Lima	1.80
Plymouth	1.28
Princeton	1.75
Waterloo	1.25
Wooster	1.90

MID-CONTINENT
(Effective May 21, 1929)
Magnolia Petroleum Company

Under 26	.70
26 to 26.9 gravity	.75
27 to 27.9 gravity	.85
28 to 28.9 gravity	.90
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.05
31 to 31.9 gravity	1.15
32 to 32.9 gravity	1.25

From 33 to 44 gravity and above, Magnolia Petroleum Company prices are the same as those of Carter Oil Company.

MID-CONTINENT
(Effective May 20, 1929)
Carter Oil Company, Gulf Pipe Line Company, Sinclair Pipe Line Company, Prairie Oil and Gas Company and The Texas Company.

25 to 25.9 gravity	.90
26 to 26.9 gravity	.95
27 to 27.9 gravity	1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 and above	1.85

WESTERN KENTUCKY

All grades	1.83

PANHANDLE
(Effecive May 20, 1929)
GRAY COUNTY
(Humble Oil & Refining Company, Magnolia Petroleum Company, Gulf Pipe Line Company.

Below 29 gravity	.90
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.00
31 to 31.9 gravity	1.05
32 to 32.9 gravity	1.10
33 to 33.9 gravity	1.15
34 to 34.9 gravity	1.20
35 to 35.9 gravity	1.25
36 to 36.9 gravity	1.30
37 to 37.9 gravity	1.35
38 to 38.9 gravity	1.40
39 to 39.9 gravity	1.45
40 to 40.9 gravity	1.50
41 to 41.9 gravity	1.55
42 to 42.9 gravity	1.60
43 to 43.9 gravity	1.65
44 and above	1.70

WHEELER COUNTY
(Humble Oil and Refining Company and Magnolia Petroleum Company)

Below 30 gravity	.90
30 to 30.9 gravity	.95
31 to 31.9 gravity	1.00
32 to 32.9 gravity	1.05
33 to 33.9 gravity	1.10
34 to 34.9 gravity	1.15
35 to 35.9 gravity	1.20
36 to 36.9 gravity	1.25
37 to 37.9 gravity	1.30
38 to 38.9 gravity	1.35
39 to 39.9 gravity	1.40
40 to 40.9 gravity	1.45
41 to 41.9 gravity	1.50
42 to 42.9 gravity	1.55
43 to 43.9 gravity	1.60
44 and above	1.65

CARSON-HUTCHINSON COUNTIES
(Humble Oil and Refining Company, Magnolia Petroleum Company and Gulf Pipe Line Company)

Below 32 gravity	.90
32 to 32.9 gravity	.95
33 to 33.9 gravity	1.00
34 to 34.9 gravity	1.05
35 to 35.9 gravity	1.10
36 to 36.9 gravity	1.15
37 to 37.9 gravity	1.20
38 to 38.9 gravity	1.25
39 to 39.9 gravity	1.30
40 to 40.9 gravity	1.35
41 to 41.9 gravity	1.40
42 to 42.9 gravity	1.45
43 to 43.9 gravity	1.50
44 and above	1.55

SOMERSET
Grayburg

Below 33 gravity	1.05
33 to 33.9 gravity	1.07
34 to 34.9 gravity	1.09
35 to 35.9 gravity	1.11
36 to 36.9 gravity	1.13
37 to 37.9 gravity	1.15
38 and above	1.17

CALIFORNIA CRUDE OIL PRICES AT THE WELL
(EFFECTIVE JANUARY 18, 1929)

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons infields indicated)

Gravity	Ventura *	Signal Hill	Alamitos Heights-Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood † Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elks Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$ .85	$ .70	$ .70	$ .70	$ .70	$ .70	$ ..	$ ..	$ .70	$ .70	$ .70	$ .70	$ .70	..	$ .50	$ .50	$ .50	$ .50	$ .50	$ .50
15-15.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
16-16.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
17-17.9	.85	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.50	.50	.50	.50	.50	.50
18-18.9	.85	.75	.75	.75	.75	.75	..	..	.75	.75	.75	.70	.75	..	.50	.56	.56	.56	.56	.56
19-19.9	.85	.80	.80	.80	.80	.80	..	..	.80	.80	.80	.75	.80	..	.50	.62	.62	.62	.62	.62
20-20.9	.85	.85	.85	.85	.85	.85	..	..	.85	.85	.84	.80	.84	..	..	.68	.68	.68	.68	.68
21-21.9	.86	.89	.89	.89	.89	.89	..	..	.89	.89	.88	.85	.88	.89	..	.74	.74	.74	.74	.74
22-22.9	.87	.93	.93	.93	.93	.93	..	..	.93	.93	.91	.90	.91	.92	..	.80	.80	.80	.80	.80
23-23.9	.90	.97	.97	.97	.97	.97	..	..	.97	.97	..	.95	.94	.95	..	.85	.85	.85	.85	.85
24-24.9	.94	1.01	1.01	1.01	1.01	1.01	1.01	..	1.01	1.01	..	.98	.97	.98	..	.90	.90	.90	.88	.88
25-25.9	.98	1.05	1.05	1.05	1.05	1.05	1.05	..	1.05	1.05	..	1.01	1.00	1.01	..	.95	.95	.95	.91	.91
26-26.9	1.02	1.09	1.09	1.09	1.09	1.09	1.09	..	1.09	1.09	..	1.04	1.04	1.04	..	1.00	1.00	1.00	.94	.94
27-27.9	1.06	1.13	1.13	1.13	1.13	1.13	1.13	..	1.13	1.13	..	1.07	1.08	1.07	..	1.05	1.05	1.05	.98	.97
28-28.9	1.10	1.17	1.17	1.17	1.17	1.17	1.17	..	1.17	1.17	..	1.10	1.12	1.10	..	1.10	1.10	1.10	1.02	..
29-29.9	1.14	1.21	1.21	1.21	..	1.21	1.21	..	..	1.21	..	1.13	1.16	1.15	..	1.16	1.16	1.16	1.06	..
30-30.9	1.18	1.25	1.25	1.25	..	1.25	1.25	..	..	1.25	..	1.16	1.20	1.20	..	1.22	1.22	1.22	1.10	..
31-31.9	1.23	1.30	1.30	1.30	..	..	1.30	..	..	..	..	..	..	1.25	..	1.28	1.28	1.28	1.14	..
32-32.0	1.28	1.35	1.35	1.35	..	..	1.35	..	..	..	..	..	..	1.30	..	1.34	1.34	1.34	1.18	..
32-32.9	..	..	..	..	..	..	1.41	..	..	..	..	..	..	1.35	..	1.40	1.40	1.40	1.22	..
34-34.9	..	..	..	..	..	..	1.47	1.16	..	..	..	..	..	1.40	..	..	..	1.46	1.26	..
35-35.9	..	..	..	..	..	..	1.53	1.22	..	..	..	..	..	1.45	..	..	..	..	1.30	..
36-36.9	..	..	..	..	..	..	1.59	1.28	..	..	..	..	..	1.50	..	..	..	..	..	..
37-37.9	..	..	..	..	..	..	1.65	1.34	..	..	..	..	..	1.55	..	..	..	..	..	..
38-38.9	..	..	..	..	..	..	1.71	1.40	..	..	..	..	..	1.60	..	..	..	..	..	..
39-39.9	..	..	..	..	..	..	1.77	1.46	..	..	..	..	..	1.65	..	..	..	..	..	..
40-40-9	..	..	..	..	..	..	1.83	1.52	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	..	..	1.89	1.58	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	..	..	1.95	1.64	..	..	..	..	..	..	..	..	..	..	..	..

KETTLEMAN HILLS—55 degree Gravity and above $1.65 per barrel. *Union Oil Company. †Changed March 18, 1929.

(See Page 45)

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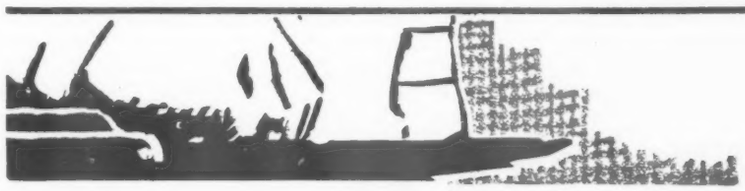

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CRUDE OIL PRICE QUOTATIONS (*Continued from Page 42*)

WEST TEXAS
(Humble, Gulf, Magnolia, The Marland Company and Southern Crude Oil Purchasing Company)*

Crane-Upton, Crockett, Howard, Pecos and Winkler Counties and Lea County, N. Mex.

Below 25 gravity	.70
25 to 25.9 gravity	.74
26 to 26.9 gravity	.78
27 to 27.9 gravity	.82
28 to 28.9 gravity	.86
29 to 29.9 gravity	.90
30 to 30.9 gravity	.94
31 to 31.9 gravity	.98
32 to 32.9 gravity	1.02
33 to 33.9 gravity	1.06
34 to 34.9 gravity	1.10
35 to 35.9 gravity	1.14
36 and above	1.18

***Gulf does not post in Winkler County; Magnolia posts in Crane, Upton and Winkler Counties. Southern Crude Oil Purchasing Company posts only in Crane, Upton and Winkler Counties.**

MARKHAM
The Texas Company
(Effective May 20, 1929)

All grades	$1.00

LULING

All grades	.90

NORTH AND CENTRAL TEXAS
(Effective May 21, 1929)
Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude
(Humble Oil and Refining Company)

Below 25	.85
25 to 25.9 gravity	.90
26 to 26.9 gravity	.95
27 to 27.9 gravity	1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 and above	1.85

SOUTH TEXAS

Mirando	.90
Salt Flat	1.25

GULF COAST
(Effective May 21, 1929)

Grade "A" all companies	1.30
Gulf Coast Light Oil, below 25	1.15
25 to 25.9 gravity	1.18
26 to 26.9 gravity	1.21
27 to 27.9 gravity	1.24
28 to 28.9 gravity	1.27
29 to 29.9 gravity	1.30
30 to 30.9 gravity	1.33
31 to 31.9 gravity	1.36
32 to 32.9 gravity	1.39
33 to 33.9 gravity	1.42
34 to 34.9 gravity	1.45
35 to 35.9 gravity	1.48
36 to 36.9 gravity	1.51
37 to 37.9 gravity	1.54
38 to 38.9 gravity	1.57
39 to 39.9 gravity	1.60
40 and above	1.63

***Humble Oil & Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crudes above 35 to $1.37 per barrel.**

Magnolia Petroleum Company's postings stop at 31 to 31.9.

WYOMING-MONTANA
(Effective May 21, 1929)
Wyoming

Byron	1.33
Ferris	1.60
Elk Basin	1.65
Grass Creek	1.65
Rock Creek	1.40
Lost Soldier	1.05
Lance Creek	1.68
Mule Creek	1.20
Notches	.65
Big Muddy	1.43
Osage	1.38
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.48
Lander	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

Salt Creek
Midwest Refining Company

29 to 29.9 gravity	.90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 and above	1.23

MONTANA
(Effective May 24)

Sunburst	$1.75
Cat Creek	1.48
Lake Basin	2.20

NEW MEXICO

Artesia	1.08
Hogback	1.43

CANADA
(Effective May 21, 1929)

Oil Springs	2.27
Petrolia	2.20

LOUISIANA-ARKANSAS
(Effective May 22, 1929
Homer, Haynesville, Caddo, El Dorado, De Soto and Crichton and Cotton Valley*
(Atlantic Oil Producing Company, Standard of Louisiana, Magnolia Petroleum Company and The Texas Company.)

27 to 27.9 gravity	$1.00
28 to 28.9 gravity	1.05
29 to 29.9 gravity	1.10
30 to 30.9 gravity	1.15
31 to 31.9 gravity	1.20
32 to 32.9 gravity	1.25
33 to 33.9 gravity	1.30
34 to 34.9 gravity	1.35
35 to 35.9 gravity	1.40
36 to 36.9 gravity	1.45
37 to 37.9 gravity	1.50
38 to 38.9 gravity	1.55
39 to 39.9 gravity	1.60
40 to 40.9 gravity	1.65
41 to 41.9 gravity	1.70
42 to 42.9 gravity	1.75
43 to 43.9 gravity	1.80
44 gravity and above	1.85

***Shreveport-Eldorado's postings stop at above 40 gravity.**

The posting on Cotton Valley is same as Caddo. From 36 to 52 and above the regular gravity schedule is followed.

The Texas Company pays North Texas gravity scale in North Louisiana.

STEPHENS
(All Companies)

Below 28 gravity	.90
28 to 28.9 gravity	.94
29 to 29.9 gravity	.98
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.06
32 gravity and above	1.10

SMACKOVER
(All Companies)

Below 24 gravity	.85
24 and above	1.00
Bellevue	1.30
Jennings	1.15
Vinton	1.30
Edgerly	1.30
Starks Dome	1.30
Urania	1.00
Calion	.75

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES POPTS
(Barrels of 42 gallons)

	Week Ended June 8		Week Ended June 1
AT ATLANTIC COAST PORTS—			
Baltimore	320,000		77,000
Boston	.....		146,000
New York	701,000		778,000
Philadelphia	502,000		390,000
Others	91,000		137,000
Total	1,614,000		1,528,000
Daily Average	230,571		218,286
AT GULF COAST PORTS—			
Galveston District	143,000	"A"	69,000
New Orleans and Baton Rouge	48,000		143,000
Port Arthur and Sabine District	102,000		.....
Tampa	6,000		.....
Total	299,000		212,000
Daily Average	42,714		30,285
AT ALL UNITED STATES PORTS—			
Total	1,913,000		1,740,000
Daily Average	273,285		248,571
Daily Average Four Weeks Ended	295,321		291,357

CALIFORNIA OIL RECEIPTS AT ATLANTIC AND GULF COAST PORTS
(Barrels of 42 gallons)

	Week Ended June 8		Week Ended June 1
AT ATLANTIC COAST PORTS—			
Baltimore	96,000		78,000
Boston	.....		.....
New York	161,000	"A"	269,000
Philadelphia	.....		.....
Others	.....		.....
Total	257,000		347,000
Daily Average	36,714		49,571
AT GULF COAST PORTS—			
Total	.....		.....
Daily Average	.....		.....
AT ATLANTIC AND GULF COAST PORTS—			
Total	257,000		347,000
Daily Average	36,714		49,571
Daily Average Four Weeks Ended	58,929		65,786
DISTRIBUTION OF TOTAL CALIFORNIA OIL RECEIPTS IS AS FOLLOWS:			
Crude	96,000		.....
Gasoline	161,000		312,000
Gas Oil	.....		29,000
Fuel Oil	.....		6,000
Total	257,000		347,000

"A"—Revised.

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1928	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
January	675,450	108,300	523,330	125,450	45,250	90,050	109,600	77,000	617,100	2,371,500	73,516,500
February	664,450	110,550	538,750	115,800	45,300	88,250	104,850	75,550	614,750	2,358,250	68,388,850
March	646,850	112,250	575,850	119,900	44,400	85,600	102,150	78,700	617,450	2,383,150	73,877,650
April	620,450	112,150	617,850	118,850	46,900	83,450	107,000	78,500	613,550	2,398,700	71,961,100
May	610,100	108,750	561,450	129,850	43,600	91,250	112,100	82,200	630,900	2,370,200	73,476,300
June	594,850	105,200	554,400	135,400	42,350	102,850	109,300	82,400	643,400	2,370,150	71,104,500
July	587,150	102,750	597,250	133,650	42,150	90,700	113,400	80,400	644,700	2,392,150	74,156,600
August	656,350	102,200	604,000	130,200	40,200	87,500	113,300	77,700	634,150	2,445,600	75,534,600
September	724,850	99,750	604,150	129,500	39,050	84,700	112,550	78,850	631,650	2,505,050	75,151,500
October	741,350	97,900	598,550	129,950	38,800	83,550	114,000	83,300	624,450	2,511,850	77,867,800
November	715,750	96,600	586,350	135,100	38,600	83,000	109,700	81,150	653,050	2,499,300	74,978,300
December	710,600	97,200	603,700	135,050	37,300	81,350	113,450	74,600	697,850	2,551,100	79,084,400
1929											
January	722,550	97,150	632,500	136,750	36,650	78,600	111,950	73,200	747,250	2,635,600	81,703,600
February	714,800	95,950	643,350	142,300	35,700	74,600	108,550	71,750	797,800	2,684,800	75,204,400
March	666,500	95,500	662,500	147,750	35,800	74,250	108,850	70,400	786,000	2,647,400	82,068,350
April	665,600	106,400	650,100	154,550	35,550	72,900	110,850	69,400	781,350	2,646,700	79,402,100
May	679,650	115,400	651,100	150,350	35,350	71,500	114,150	72,850	749,250	2,639,600	81,827,600
June 1	686,850	118,150	676,200	143,600	35,150	71,450	115,750	74,300	790,200	2,711,650	18,981,550
June 8	683,050	119,100	688,700	146,700	34,900	70,900	116,150	69,450	795,500	2,724,450	19,069,050
June 15	674,700	120,800	688,050	147,300	36,750	69,950	116,500	73,900	815,300	2,743,250	19,202,750
Increase	.....	1,700	.....	600	1,850	.....	350	4,450	19,800	18,800	133,700
Decrease	8,350	.....	650	.....	.....	950	.....	.....	.....	.....	.....

TEXAS

(Outside Gulf Coast)

PANHANDLE DISTRICT

	June 15	June 8
Carson County	7,300	6,800
Gray County	50,750	51,400
Hutchinson County	26,100	28,100
Wheeler County	900	1,000
Other	1,400	1,800
Total	86,450	89,100

NORTH TEXAS

Archer County	17,150	17,000
Burkburnett	9,050	9,000
Electra	12,100	12,250
Iowa Park-KMA	5,050	5,200
Montague and Cooke Cos	12,600	12,700
Wilbarger	26,750	26,850
Others	600	600
Total	83,300	83,600

WEST CENTRAL TEXAS

Brown County	7,550	7,600
Callahan County	3,950	3,800
Coleman County	3,800	3,900
Eastland-Desdemona	6,500	6,450
Jack County	2,650	2,500
Palo Pinto County	400	350
Shackelford County	11,750	13,000
Stephens County	6,300	6,400
Throckmorton County	600	600
Young County	6,900	6,800
Others	600	650
Total	51,000	52,050

WEST TEXAS

Crane-Upton Counties	47,000	46,900
Crockett County	2,100	2,100
Howard County	43,750	44,950
Jones County	3,750	4,100
Mitchell-Scurry Cos.	2,700	2,700
Pecos County	104,900	102,100
Reagan County	18,100	18,350
Winkler County	143,700	143,100
Others	1,800	1,800
Total	367,800	366,100

EARST CENTRAL TEXAS

Boggy Creek	2,800	2,700
Corsicana-Powell	7,950	8,100
Currie	400	400
Mexia	5,850	5,950
Nigger Creek	500	600
Richland	400	400
Wortham	1,100	1,150
Total	19,000	19,300

SOUTHWEST TEXAS

Dale	500	550
Laredo District	11,100	11,200
Luling	11,900	11,750
Lytton Springs	900	950
Somerset	1,850	1,800
Salt Flat	50,200	48,400
Others	4,050	3,900
Total	80,500	78,550
T'tl Tex. (Outside Gulf Coast)	688,050	688,700

TEXAS GULF COAST

Barbers Hill	8,300	9,200
Batson	1,400	1,400
Big Creek	2,050	1,800
Blue Ridge	3,550	3,750
Boling	1,700	1,700
Damon Mound	600	700
Goose Creek	5,900	5,800
Hull	9,500	10,000
Humble	5,900	6,300
Orange County	2,900	2,800
Pierce Junction	18,800	17,100
Raccoon Bend	5,950	5,300
Saratoga	900	900
Sour Lake	2,750	2,700
South Liberty	5,500	5,600
Spindle Top	25,750	27,100
Sugar Land	11,150	11,200
West Columbia	6,350	6,100
Washington County	2,700	2,700
Others	3,800	3,650
Total	125,450	125,800
Texas Total	813,500	814,500

OKLAHOMA

Braman	3,800	3,700
Logan Co.	15,600	15,600
Blackwell	3,850	3,900
Hubbard	1,850	1,850
Thomas	900	900
Tonkawa	10,050	10,200
Garber	5,800	5,750
Burbank	19,850	20,150
Osage (outside Burbank)	25,600	25,700
Cushing	19,200	19,250
Yale Jennings	6,800	6,850
Davenport	1,450	1,500
Bristow Slick	19,300	19,350
North Okmulgee	13,000	13,100
Lyons Deaner	7,700	7,800
Cromwell	8,100	8,150
Papoose	3,300	3,300
Wewoka	4,800	4,800
Seminole	34,800	35,600
Bowlegs	35,000	36,050
Searight	12,050	12,800
Little River	76,650	77,350
Earlsboro	59,900	59,400
Duncan District	6,750	6,700
Graham	4,200	4,250
Fox	1,400	1,400
Healdton	12,800	12,850
Hewitt	8,200	8,150
Scholem Alechem	12,900	13,000
Pearson	1,500	1,550
St. Louis	87,200	88,200
Allen	23,050	24,300
Maud	26,800	27,700
Mission	38,050	41,250
Oklahoma City	2,500	2,600
Others	60,000	58,050
Total	674,700	683,050

CALIFORNIA

Santa Fe Springs	222,500	216,000
Long Beach	175,000	173,000
Huntington Beach	42,500	40,500
Torrance	13,500	13,000
Dominguez	10,000	9,300
Rosecrans	5,300	5,300
Inglewood	22,500	22,000
Midway-Sunset	64,000	64,000
Ventura Avenue	62,500	57,500
Seal Beach	44,000	41,000
Elwood-Goleta	26,600	27,000
Kettleman Hills	3,400	3,400
Others	123,500	123,500
Total	815,300	795,500

KANSAS

Greenwood County	21,050	21,300
Florence-Covert	950	950
Peabody-Ebling	2,700	2,750
Eldorado-Towanda	12,950	12,900
Augusta-Fox Bush	2,950	3,000
Rainbow Bend	1,050	1,050
Russell	3,350	3,400
Churchill	6,500	6,300
Oxford	4,450	4,650
Sedgewick	35,050	32,800
Others	29,800	30,000
Total	120,800	119,100

NORTH LOUISIANA

	June 15	June 8
Homer	3,950	4,000
Haynesville	5,200	5,250
Caddo Light	9,850	8,100
Caddo Heavy	3,100	3,200
DeSoto-Red River	3,900	3,900
Elm Grove	650	600
Bellevue	600	600
Cotton Valley	2,800	2,750
Urania	6,000	5,800
Pleasant Hill	450	450
Others	250	250
Totals North Louisiana	36,750	34,900

LOUISIANA GULF COAST

Bayou Boullion	400	800
East Hackberry	2,200	2,300
Hackberry	2,500	2,650
Edgerly	700	700
Evangeline	3,350	3,300
Lockport	4,100	4,000
Sorrento	250	250
Sulphur Dome	2,200	2,000
Sweet Lake	500	300
Vinton	5,000	3,800
Others	650	800
Total Louisiana Gulf Coast	21,850	20,900
Louisiana Total	58,600	55,800

ARKANSAS

El Dorado	4,600	4,650
Champagnolle	7,350	8,000
Smackover Light	6,050	6,050
Smackover Heavy	48,550	48,700
Stephens	1,000	1,000
Nevada	950	1,050
Lisbon	1,350	1,350
Others	100	100
Total	69,950	70,900

MOUNTAIN STATES

WYOMING

Salt Creek	31,050	26,050
Grass Creek	2,350	2,200
Elk Basin	750	800
Big Muddy	2,250	2,250
Lost Soldier	3,300	3,100
Rock River	2,250	2,400
Lance Creek	250	300
Oregon Basin	4,100	3,800
La Barge	1,750	1,750
Others	4,000	3,700
Total	52,050	47,400

MONTANA

Cat Creek	1,400	1,450
Sunburst	6,850	6,850
Pondera	3,150	3,300
Others	100	100
Total	11,500	11,700

COLORADO

Moffats (Craig)	1,650	1,700
Fort Collins	2,500	2,450
Florence	950	1,000
Others	2,600	2,550
Total	7,700	7,700

NEW MEXICO

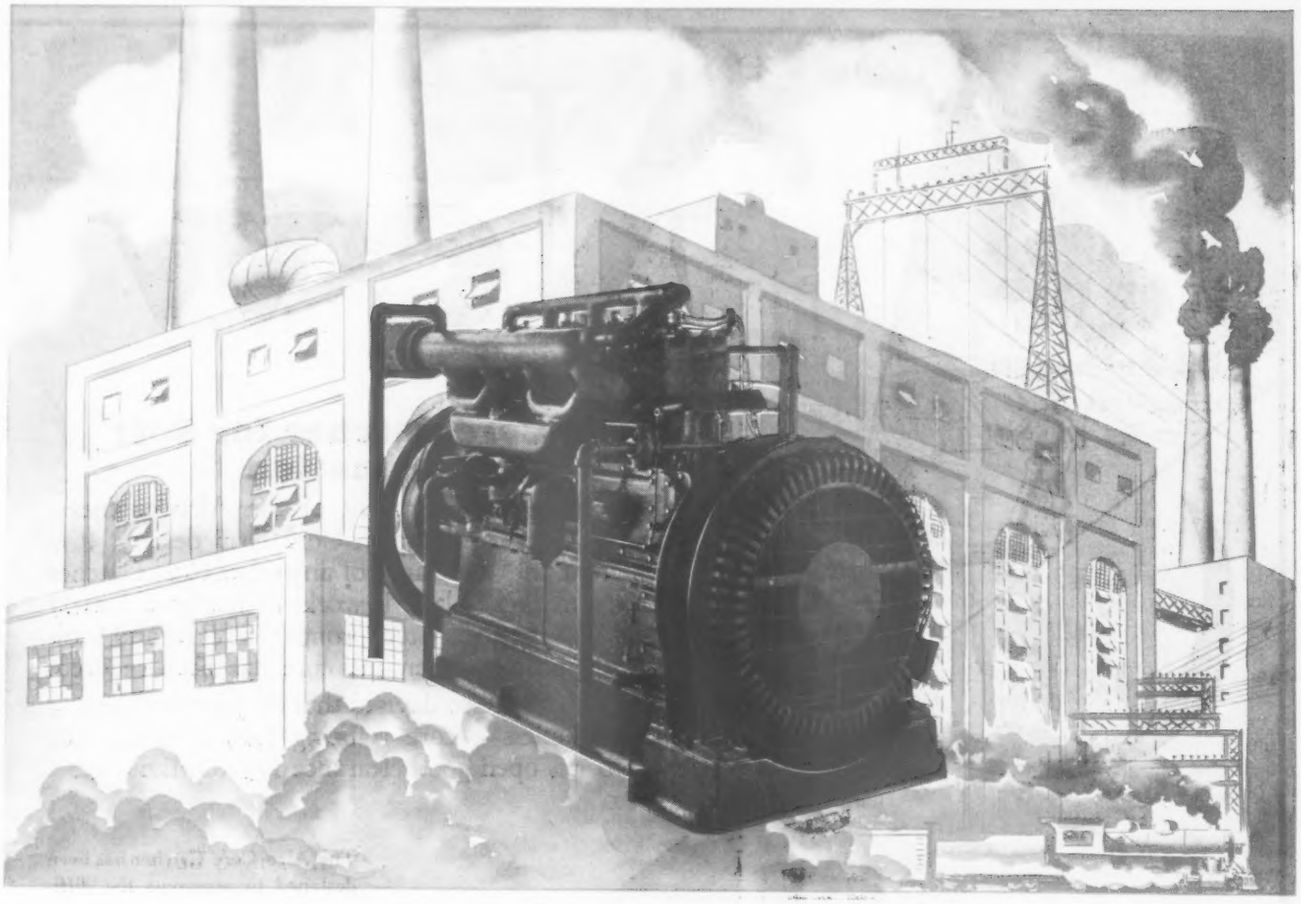
Table Mesa	...	...
Artesia	900	900
Hogback	200	250
Rattlesnake	1,150	1,100
Others	400	400
Totals	2,650	2,650
Totals Mountain States	73,900	69,450

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., and N. Y.)	116,500	116,150

PRODUCTION SUMMARY

East of Rockies	1,854,050	1,859,500
Total U. S.	2,743,250	2,724,450



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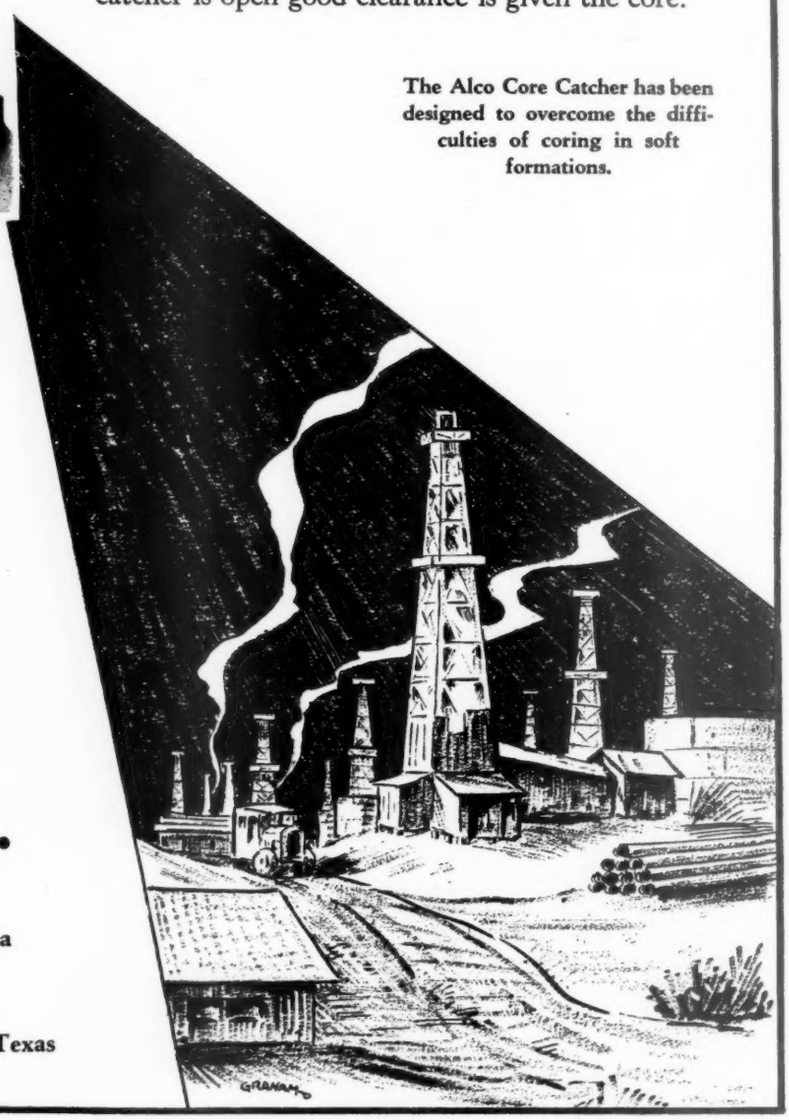
The Alco Core Catcher has been designed to overcome the difficulties of coring in soft formations.



This new devise is of great value to drillers who have been losing cores in formations that would not hold together.

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North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Gray County Drilling Boom Showing Results

AMARILLO, Texas. — Gray County's belated boom on drilling and production reached new levels during the past week when the crude output averaged 50,800 barrels daily, or an increase of 6125 barrels as compared to the production for the previous week. Field work also registered a substantial gain to further cinch the county's leadership over any other county in the state on drilling operations, with a total of 65 tests under way; 44 derricks and rigs, and 15 live locations, making a total of 124 operations.

The odd feature of this outburst of drilling and production is that it is largely confined to within a five mile radius of the discovery oil well of the county, after a lapse of five years to the month. Gray County contributed its first oil producer late in June, 1924, through the wildcat efforts of the H. F. Wilcox Oil & Gas Company, Tulsa, on the P. A. Worley & Reynolds ranch. This discovery well was drilled in the southeast corner of Section 62, Block 3, I&GN Survey, and the center of current activity and heavy production is less than three miles to the south and five miles to the southeast of the pioneer well, which was completed as a 50-barrel producer in the same horizon now in the limelight. Farrish-Watts-Collins & Crosby drilled the discovery well on contract, using a combination rig. During this five-year interval, the H. F. Wilcox Oil & Gas Company has completed 36 oil producers, including some small wells, and one junked hole, but the bulk of this activity took place to the northwest of the discovery well.

A combination of circumstances is largely responsible for the long delay in giving Gray County a "drilling play," as the county gained production in commercial quantities about the time that Hutchinson and Carson Counties began coming into their own with flush production. Crude demand and prices have been in a slump the greater portion of the time that has elapsed since Hutchinson County reached its high level of about 153,000 barrels in November, 1926. Prices have been the principal factor in holding back Gray County development, but within the past three months 40 to 44° gravity oil produced in the county has become popular with both major and independent purchasers, and the former are encouraging drilling to help fill the four trunk lines serving the Panhandle. These trunk lines have an aggregate maximum capacity of 120,000 barrels daily, and in April the total output of the district dropped to one-half the capacity of these carriers.

Six Completions

Six new producers were completed in Gray County for a combined initial flow of 7000 barrels during the past seven-day period. Completions will not begin to reflect the heavy development program that began in earnest late in May until the last one-half of July and August, as about 40 to 50 days are required on average to drill these wells. J. Alvin Gardner, C. P. Gardner and W. P. Collins' Saunders-Lincoln 1, located in the northeast corner of the west one-half of the northeast quarter, Section 3, Block 1, ACH&B Survey, widened the flush area to the east, last week with an initial flow of 2050 barrels of oil and five million cubic feet of gas after being shot in granite wash formation at a total depth of 2786 feet.

Valuations on producing properties in the flush area of Gray County reached a new peak last week when the Phillips Petroleum Company paid $1,200,000 cash for Operators Oil Company & Danciger Oil & Refining Company's William Jackson 80-acre lease, consisting of the north one-half of the northeast quarter of Section 88, Block B-2, H.&G.N. Survey, with five wells making about 10,000 barrels daily.

About three-fourths of this production was from one well, and shortly after the new owners took possession of the property this heavy producer ceased flowing, but was revived quickly for an average of 4675 barrels during the following five days. This big producer is Jackson 7, located in the northeast corner of the lease.

Magnolia Petroleum Company's Bowers 4, an east offset, resumed flowing on the morning of June 12 after being "dead" for nine days, and made 2318 barrels during the first day, with beneficial results to production of the offset of Phillips Petroleum Company.

Gulf Production Company's Jackson 1, a north offset to Magnolia Petroleum Company's Bowers 4, failed to encounter the big production, but swabbed 1255 barrels of 44.6° gravity oil at 2880-2968 feet, while The Texas Company's Bowers 6, which occupies the other corner of the four well setup, likewise missed out on the flush, and at last reports was cleaning out with 1500 feet oil in hole at 2940 feet.

Erratic appearance of flush output in the active Gray County area, as illustrated above, is typical of the Texas Panhandle as a whole, and many disappointing completions are anticipated from the tests now underway, thus lessening the development from being a market factor. However, the completion of unusually large wells in this high gravity area overshadows the disappointments, and the operators are showing a willingness to take their chances on scoring one or more heavy producers.

A noticeable pick-up in field work in other oil producing counties in the Panhandle has been in evidence for several weeks, and last week Hutchinson County added seven new locations, while Carson and Wheeler Counties contributed four each. Many lease owners in these three counties had gotten behind on taking care of necessary offsets and usual development obligations, thus accounting for a portion of the new activity.

Hartley County commanded attention last week when the wildcat test of the Canadian River Gas Company's Lee Bivins 9-A, center NW¼ Section 6, Block 21, C. S. S. Survey, encountered about 100,000 cubic feet of wet gas at 3990-4004 feet after passing up a 15 million cubic foot flow of dry gas at 3300-35 feet. Wet gas at this horizon is not a common occurence.

Butler County Wildcat

Wichita.—Phillips Petroleum Company et al's McClelland 1, SE SE SW Section 23-26-6e, southeast of Eldorado, in Butler County, Kansas, is being abandoned at 3305 feet, after encountering water.

New Pecos County Pool Opened 19 Miles From Yates

SAN ANGELO.—Wildcat efforts of the Taylor-Link Oil Company on University land established a new pool in Pecos County and about 19 miles west of the Yates field late Saturday flowing by heads at the rate of 80 barrels daily after drilling 12 feet of saturated lime to a total depth of 1625 feet.

This wildcat is also making water from an upper horizon, and the owners were running a string of six-inch casing with packer early this week to make a production test.

Five other tests are now underway, or in process of completion on University land in this general section of Pecos County, and because of the split up in lease ownership, the area is being observed closer than any other in the West Texas district.

Gulf Production Company failed to make any material progress on the completion of its two new tests on its O'Brien-Hutchings producing block in Ward County during the past week. O'Brien 5, located about one mile north of the discovery well, flowed 25 barrels of oil Monday at 2652 feet in sand, and Tuesday was bailing and testing. Hutchings 2, located 2¾ miles southeast of the discovery well, was rigging up pipe line connections and installing an oil saver Tuesday morning with several hundred feet of oil in the hole from top of sand at 2480 feet. The latter is the highest of the trio of tests from a structural standpoint, and opens the way for other lease owners to share in this new field.

A series of semi-shallow oil and gas pools, rather than one single producing area, is believed to be the final outcome of the development now taking place west of Yates field in Pecos County on fee lands of the University of Texas, centering on Blocks 16, 17 and 18.

Taylor-Link Oil Company's University 1, which is located in the southwest corner of Section 30, Block 16, is the best oil strike made as yet, while the play dates back to the completion of a seven-million cubic foot gas well early this year by Geo. H. Anderson and Tower-McKana, Inc.'s University 1, Section 11, Block 17, at a total depth of 1998 feet. The latter is located on the east edge of the area now occupying the center of interest, and passed up a good show of oil. Taylor-Link Oil Company's University 1 is about five and one-half miles northwest of this capped gas well and logged the top of the salt at 835 feet and top of lime at 1375 feet, with a surface elevation of 2500 feet. This test developed a good show of dead oil at 935 feet, and a quarter million cubic feet of dry sweet gas at 1195-1204 feet, with light flow of sulphur water at 1378-80 feet. The oil horizon now being tested was encountered June 15 at a reported depth of 1613-25 feet, and the well began flowing by heads at estimated rate of 80 barrels daily of 27.6° gravity oil, with some water from above.

Buell-Hagan et al's University 1-B, located in the southeast corner of Section 36, Block 18, and four miles south of the new oil producer, encountered three million cubic feet of gas and 1000 barrels of 25° gravity oil at 1320-32 feet last week. Swabbing tests have been given this test, with indications of a small pumper in its present status. Tidal Oil Company's University 1, C SW¼ Section 16, Block 20, and about three and one-half miles northwest of Taylor-Link Oil Company's producer, is logging formations high on structure, with promise of being the highest test in the group, having struck top of salt at 784 feet and brown lime at 1270 feet, with elevation of 2482 feet. The California Company holds leases on four solid sections lying between the Tidal-Taylor-Link Oil Company tests that were obtained some years ago at 30 cents per acre.

Yates Potential

Revised estimates on potential production of the Yates field announced June 15 by Umpire Ray Richmond amounted to 4,934,305 barrels from 306 wells, but no old wells were tested for potential, and only one new producer was added since previous figures were released at the close of May. The number of wells in this prolific shallow area that are making cut oil increased to 44, according to official figures, or a gain of five since May 1. Since the output of the field is to be advanced from 100,000 to 130,000 barrels daily effective July 1, but subject to final approval of the Texas Railroad Commission after a special hearing on the matter in Fort Worth June 25, plans are now going forward to re-test all completed wells in the field. W. A. Moncrief, Fort Worth operator and chairman of the proration advisory committee, has notified all operators to permit the umpire and his assistants to proceed with the gauging work immediately. A special effort is to be made to reduce the potential figures as much as possible, as the totals now credited to individual wells are considerably exaggerated on actual open flow for a 24-hour period.

Hendrick field and other Winkler County pools were credited with a potential of 1,056,723 barrels on June 15 from 589 wells, or a loss of 254,484 barrels for the 15-day period, and only eight wells were gauged to determine the new figures, with the bulk of the drop largely due to an arbitrary cut taken on each 40-acre unit. Winkler County can be counted upon to break below the one million barrel potential estimate by July 1, with steady drops from now on, as the potential figures are far from being a true indication of what this county could produce. Allowable production remains at 150,000 barrels daily, but so many 40-acre units are unable to produce their earned quota that current production is averaging about 7500 barrels below the maximum permitted under proration rules. Gulf Production Company's Daugherty 1-B, located in the southwest corner of the NW Section 22, Block 26, extended the Hendrick field one-half mile north last week, making 2268 barrels of oil and 1020 barrels of water at 2745-50 feet, and will deepen.

Phillips Buys Property in Gray County

Amarillo, Texas.—Phillips Petroleum Company acquired the most productive oil lease in Gray County section of the Texas Panhandle last week through the purchase of Operators Oil Company and Danciger Oil & Refining Company's J. B. Bowers 80-acre tract, with five wells making about 10,000 barrels of 42-44 gravity oil daily, for a reported cash consideration of $1,200,000. This lease is located in the north one-half of the northeast quarter of Section 88, Block B-2, H.&G.N. Survey, and is surrounded by production, while four of the completed wells had registered initial flows above 1800 barrels daily, including one recent completion that gauged 14,250 barrels daily at 2960-63 feet. The three remaining locations are now being drilled by the new owners.

The Operators Oil Company maintains headquarters at Tulsa, and has scored outstanding success with its Gray County operations. Jas. G. Cloud, Tulsa, is president of the company, which has 200,000 shares of non-par stock, and T. W. Doswell, Pampa, Texas, is in charge of the Panhandle operations. The Danciger Oil & Refining Company, Fort Worth, held an undivided one-fourth interest in the above prolific lease, which is credited with having produced 268,450 barrels bringing a market price of $355,238 from the time that the first well was completed early in December, 1927, to the close of May. This affords a recovery of 53,690 barrels of oil per well, although the big producer was not completed until the last day of May. The above figures do not include revenue derived from the sale of casinghead gas.

Gas Show

Tulsa.—Independent Oil & Gas Company and Kingwood Oil Company's Scott 1, SWc SE SE Section 6-8-9, Holdenville district of Hughes County, Oklahoma, is making 10,000,000 feet of gas from the Cromwell sand at 3608-15 feet. It has a show of water and is now fishing.

Big Gas Well

Tulsa.—Prairie Oil & Gas Company's Miracle 2, SE SE Section 29-12-10, near Okemah, in Okfuskee County, has been completed as a gas well for 12,000,000 cubic feet at 3137 feet.

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(Catalog Division)

HOUSTON

Oklahoma--Kansas Field Notes

WARREN BAKER, *Staff Representative, Tulsa, Oklahoma*

Kelly Pool, With Three Producing Sands, Looks Promising

TULSA.—The finding of Wilcox sand production, and the deepening of a Hunton lime well which doubled its recovery, placed the Kelly extension area to the St. Louis field in the foreground of Oklahoma developments during the past week. The Kelly pool now has production in the Hunton lime, Simpson and Wilcox sands. These developments make it appear that a lot of oil will be produced in the district. How large an area the pool may cover is still a question, with many still holding to the idea that the producing region will be small, but should the Wilcox production underlie any area of good dimensions the district will rank among the foremost in the state today.

Keister & Manning, Martin & Erwin, McGraw Oil Company, Shaffer Oil & Refining Company, and Sinclair Oil & Gas Company's Kelly 2, NEc Section 2-7-4, one location north of the discovery well, was deepened 10 feet to 3855 feet in the Hunton lime and increased its production from 1875 barrels to 3385 barrels. This now is one of the best Hunton lime wells in the state.

A diagonal northeast offset to Kelly 2, Superior Oil Corporation's Jackson 1, SWc Section 36-8-4, swabbed 50 barrels from the Hunton lime at 3888-3984 feet. Apparently the area to the west is the best prospect for production, with the 80-acre Kelly lease looking like the best bet in the Hunton lime.

Phillips Petroleum Company's Grace 1, NE SE NE Section 2-7-4, south offset to the discovery producer, had the Woodford at 3850 feet, the Hunton at 3852 feet, with a good showing of oil in the top.

Other Important St. Louis Area Developments

The continued fine performance of the Independent Oil & Gas Company's Rhodd 1, NWc, Section 16-7-4, together with new activity, keeps a great deal of interest centered in the western part of the St. Louis area. This well is now on gas lift and has increased its flow to 3710 barrels. The producing formation of the Rhodd well is the Simpson sand. This well opened a new Simpson sand producing area midway between Pearson and St. Louis a few weeks ago when it was drilled in. The large flow has caused some to believe that it may be in the Wilcox sand, instead of the Simpson.

TULSA — Independent Oil & Gas Company's Barrows 1, SWc NW NW Section 1-7-4, in the Kelly Pool on the St. Louis district, when deepened four feet to 4246 feet in the Wilcox sand, swabbed 485 barrels in 10 hours. It will be deepened and shot.

This is the first Wilcox sand production in Kelly Pool, and although not an unusual well, it means much.

Gypsy Oil Company's Kennedy 1, south offset to Independent Oil & Gas Company's Barrows 1, which had the Hunton lime at 3843 feet, is drilling 3995 feet, with 800 feet of oil in the hole, and will probably drill to the Wilcox sand. This well has found a lot more Hunton lime than the Wilcox producer, and its outcome will be of great importance, since the Wilcox will probably be found lower.

Several new wells have been completed in the north extension to the Pearson field, extreme western St. Louis district. Prairie Oil & Gas Company and Shaffer Oil & Refining Company's Rice 1, SWc NE Section 17-7-4, was deepened 10 feet to 4143 feet in the Simpson sand and made 1490 barrels in 12 hours.

Magnolia Petroleum Company and Pierce Petroleum Company's Eubanks 1, SW SE NW Section 17-7-4, has a total depth of 4178 feet in the Simpson sand found at 4150 feet and made 2662 barrels flowing natural. Independent Oil & Gas Company and Darby Petroleum Company's Pappan 1, NE SE SE Section 16-7-4, has the Hunton lime from 3690-3798 feet, and flowed 1462 barrels.

These new promising developments, together with the vast territory they have opened, with possibilities of production in the Hunton, Simpson and Wilcox sands, stands out as a ranking new producing area in Oklahoma. With increased development St. Louis production may again increase to more than 100,000 barrels per day, and if a big Wilcox sand structure should be found it might go to new heights.

Plenty of Trouble At Oklahoma City

Operators are experiencing plenty of trouble in getting wells to the producing sand in the Oklahoma City field, gas blowouts making it a very slow and tedious task to penetrate the last part. Consequently the past week went by without the anticipated second deep completion in the pool, and it may be another week before a test can get in.

Sinclair Oil & Gas Company's Stamper 1, NE SW NW Section 30-11-2w, succeeded in getting the tools out of the hole, then bailer stuck. This well has a depth of 6370 feet with 3000 feet of oil in the hole, and drilling ahead. It has about 30 feet to go if the producing horizon is found at the same depth as in the discovery producer.

Four or five other tests are fighting the gas, trying to mud it off to drill deeper. In the meantime, Oklahoma operators are keeping a careful watch on the area. They are anxious to see it tested and find out what to expect. The production performance of the lime pay after a number of wells are in will be very interesting to watch. Many think a quick decline will be had.

Indian Territory Illuminating Oil Company and Foster Petroleum Company's Fee 1, C SE SE Section 24-11-3w, discovery producer, has dropped to slightly better than 2500 barrels daily, while its water production has increased to more than 600 barrels per day. Few wells in recent years, however, had had the recovery of this one. It has produced over 780,000 barrels.

Important Logan County Well

J. S. Cosden & Company's Gardner 1, NE NE NW Section 31-19-4w, slightly southwest of the McCully field in Logan County, is flowing 65 barrels per hour while drilling at 5840 feet. It topped the second dolomite at 5835 feet with a little increase in oil, but most of the increase has come with deeper drilling. It is making 7,000,000 feet of gas. Two days ago the well was producing 550 barrels per day.

This well is running much higher than most of the producers in the McCully area and has been watched for some time. It has greatly revived interest in the field,

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and lends much speculation as to the direction of the producing trend. It greatly improves the west side, where late developments have been best, although this region was considered unfavorable when first found.

Asher Out of Way

The Asher pool appears to be practically out of the picture, and will remain so unless some of the edge wells open up something, which is not looked for. Last week McCulloch Oil Company and Carter Oil Company's McDowell 1, NW SE SE Section 28-6-4e, was said to be looking bad. It found water during the past week, but is drilling ahead. This test is southeast of the field.

Tom Slick Oil Company's Bledsoe 2, SWc NW Section 20-6-4e, on the south edge of the field, filled up with water in the Viola lime.

Of interest was the showing of oil through a hole full of water found in Simms Oil Company's Alexander 1, SEc Section 18-6-4, north edge of the field. This well has a total depth of 3983 feet in the Simpson sand, still carrying the water from above. The showing was found at 3980 feet.

Hall & Briscoe's Townsite 1, SE SW SE Section 18-6-4, on the Asher townsite, cored from 3808-28 feet in the Viola lime and found it saturated. Eight-inch casing is being run. This is the only promising development yet to occur on the townsite.

Allen Wilcox Failure

Prospects for Wilcox sand production in the Sasakwa sector of the Allen field do not appear any too bright. A dry hole was found last week, and a number of important wells are running low.

Sunray Oil Company and Cal-Cul Oil Company's Joanna 1-A, SW NW SW Section 24-5-7e, found the Wilcox sand at 4339 feet and at two feet in it had filled with water.

The Texas Company's Jefferson 1-A, NE SE NE Section 23-5n-7e, and Sinclair Oil & Gas Company's Jefferson 2, NE NE SE Section 23-5n-7e, were both running low. The Texas Company well had the Viola lime at 4125 feet and Sinclair Oil & Gas Company's well was in the Woodford at 3825 feet.

The discovery well had the Mayes at 3505 feet, the Woodford at 3600 feet, the Hunton at 3865 feet, the Sylvan at 3935 feet, the Viola at 4019 feet and the Wilcox sand at 4248 feet.

Dickinson County

Wichita.—B. R. Cross and Frank Houcke will drill a wildcat test in the NEc Section 12-15-2e. The location is on a core drilled and magnetometer-surveyed block located nine miles northwest of Hope, in Dickinson County, Kansas.

Deep Test

Tulsa.—Indian Territory Illuminating Oil Companys Cook 1-A, NW Section 10-1n-11e, Coal County, Oklahoma, is drilling ahead below 7365 feet in shale. It is the deepest test ever drilled in the state.

Water Show Marks First Limit Of Greenwich Production

WICHITA, Kansas. — One-quarter of a mile east of the new Greenwich field in Sedgwick County, Shell Petroleum Corporation's test in NW NE SW Section 14-26-2e, has found a hole full of water at 3218-19½ feet in regular producing horizon. This is the first definite marker in the immediate vicinity of the Greenwich pool, which has been ranked quite highly by operators since it was discovered by the Shell Petroleum Corporation's Lygrisse 1, in Section 15-26-2e.

Another one of Sedgwick County's new fields received a set-back, when Hartman & Skaer's well in NW SW SE Section 21-28-1e, in the Robbins district south of Wichita, encountered water in the chat. The top of the Mississippi lime was 3078 feet. It encountered a very small show of oil at 3109 feet, with the water coming in from 3116-22 feet. Recent development in the Robbins area have not been encouraging and the prospect is for a pool having only a small producing area.

Lario Oil & Gas Company made a new strike when Galancey 1, SWc Section 10-26-3e, one mile northeast of Benton, in Butler County, and six miles east of the Greenwich field, topped a chat at 2760 feet, after finding the Mississippi lime at 2738 feet. Eight-inch pipe was set at 2424 feet. At a total depth of 2765 feet the well made 400 barrels of 24 gravity oil in 24 hours.

Producers Oil Company's Jones 1, C SW NE SE Section 31-26-2e, south of the Greenwich field, had the base of the Mississippi lime at 3304 feet. The Simpson sand was found at 3359 feet, with the hole filling up with water at 3367 feet. It is drilling deeper to the Wilcox sand.

The Valley Center field is now 10 months old, the discovery well, Marland Production Company-Gypsy Oil Company-Bu-Vi-Bar Petroleum Company's Wright 1, SE NE SE Section 12-26-1w, having been drilled in on August 8. During the 10 months of its life this well has produced 355,000 barrels of oil. It is still making better than 625 barrels daily.

Other Developments

Ted Washabaugh has succeeded in landing eight-inch pipe in his Voshell 1, NW Section 9-21-3w, McPherson County wildcat test. A bailer is still in the hole, but is expected to offer little difficulty, after which the eight-inch will be cemented, when the chances for completion of the well will be good.

Barnsdall Oil Company's Lauck 1, C SW Section 35-18-21w, about 15 miles east of Ness City, in Ness County, western Kansas, has cemented casing at 4229 feet and has shut production off. It will be several days before the plugs will be drilled out.

Central Commercial Oil Company's Ellis-King 1, C NE SW NE Section 20-13-21w, south of Riga, in Trego County, Western Kansas, has been put on the pump after being shut in for some time. It will be about 10 days before it can be pumped regularly. Through two-inch tubing the steam operated pump was unable to pump it off.

Seminole District Engineers Have Repressuring Round Table

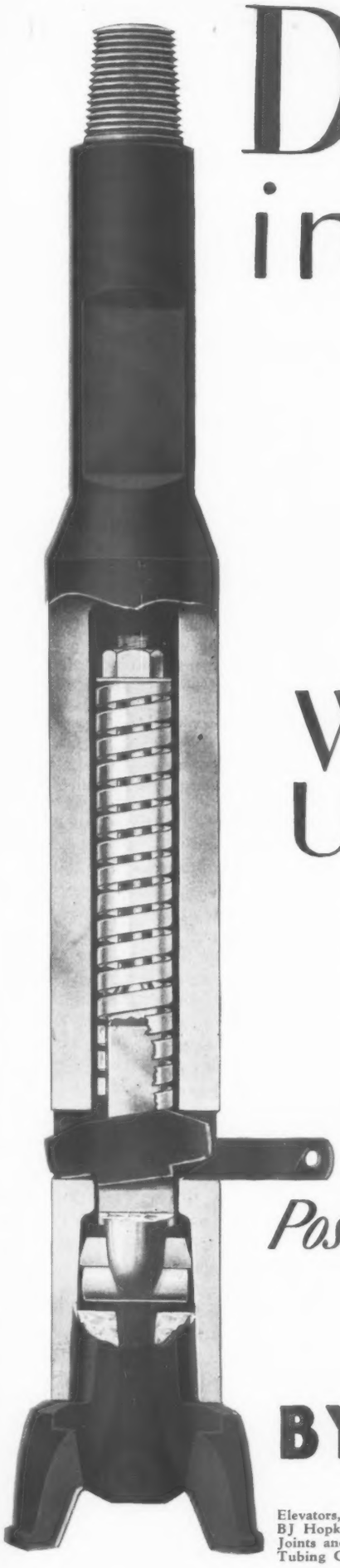
SEMINOLE.—The regular monthly meeting of the Seminole district members of the Mid-Continent section of the American Petroleum Institute, division of development and production engineering, held at Seminole, June 11, drew a large crowd.

A very interesting discussion of repressuring and holding back-pressure on producing wells came from the round-table method employed at these meetings.

Little repressuring being done in the Seminole area at present. Proration has played a large part in doing away with this work, as has also the ability of the air-lift plants to bring the oil to the surface. Several companies have tried repressuring, using the residue gas from the gas plants, but none has continued it because of being called to curtail output. One company took an old well making but a few barrels daily and used it for the key well. Immediate results occurred in wells located two locations away. On taking the pressure off, a let up in production occurred at once. This was on the Wilcox sand. The pressure did not channel but spread in all directions. Most of those present were of the opinion that the Wilcox sand could be repressured in the Seminole district. It is likely that in the future, with proration lifted, that more work along this line will be done.

Several of the superintendents reported that they were holding back pressure on producing wells and believe that they are helping their wells, especially where water has made its appearance. This method is used on the Earlsboro, Misener, Hunton, and Wilcox sands by various superintendents. The practice is not wide-spread as yet, but with water intruding in the older parts it will probably be more frequently used.

The back pressure, often running as much as 90 pounds or more, is also applied to pumping wells. It was pointed out that this method greatly reduced rod trouble and aided in holding back the water, while the daily oil production average was higher, due to less rod trouble.



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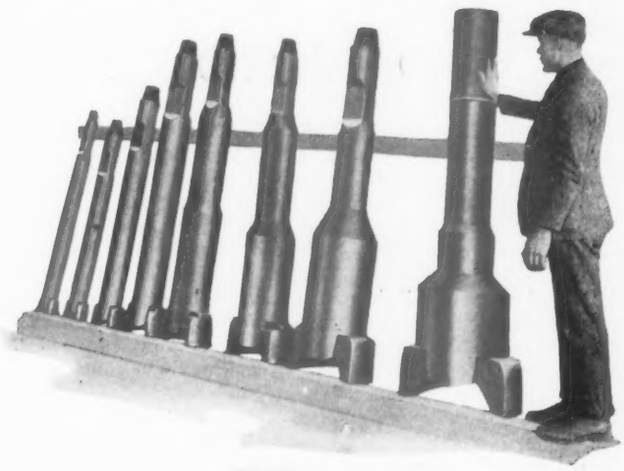

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News From California Fields

BRAD MILLS, ***Staff Representative, Los Angeles, California***

Santa Fe Springs Production Holds Up Despite Fire Loss

LOS ANGELES. — Despite a lull in completions and the loss of at least 10,000 barrels daily from a serious fire, production at Santa Fe Springs failed to give ground during the week. Only one large well was completed but the decline from the O'Connell zone was little more than noticeable. This resistance to a drop, such as was registered in the Buckbee zone, and the fact that a large number of wells will be completed within three weeks, gives the field a very dangerous appearance and production looks considerably higher in the future.

Average production of the O'Connell zone wells has been far above that recorded in the Buckbee zone and compares favorably with the average in the Meyer zone. Ten thousand-barrel wells have ceased to be a phenomenum and 5000-barrel producers are rather common.

With a thickness of 400 feet, and fully 100 feet of the Upper Clarke zone thrown in for good measure, the O'Connell zone has the snap necessary to make long-lived producers and the volume to push the peak steadily upward. Absolutely free from water and with a very low gas-oil ratio, the sand undoubtedly will have a much slower decline than originally anticipated.

A survey of the field shows that 26 wells are drilling in the O'Connell zone and 17 are cemented over the formation. Most of these wells should be completed within three weeks, and if the average production is even much smaller than that of the first completions, the field should show a sharp gain.

Proration Not Effective

A peak of 300,000 barrels has been suggested, but this figure is undoubtedly too high. Conservative estimates place the absolute peak at 250,000 barrels, with an excellent chance that production will not go much higher than the present figure, due to the enforcement of the new gas conservation law. If this law is enforced within three weeks, total production may be reduced sharply.

Curtailment under the umpire's orders has not been effective, despite the public expression of the majority of operators that they were heartily in accord with the provisions of the order. After the passage of the gas conservation law, there was a sort of "Oh, well what's the use" feeling and shut in production failed to show a further increase. It is estimated that about 20,000 barrels is shut in, but this figure probably is too high. The field is supposed to be producing 150,000 barrels, the excess totaling fully 70,000 barrels. The breakdown was not caused by the weakness of the umpire but by the lack of cooperation among the operators.

Already plans are being made for development of the Clarke zones, particularly the Lower Clarke. Near the center of the field, the Lower Clarke sand does not yet hold much attraction, due to the predominance of the O'Connell formation. The Upper Clarke is being developed in a kind of automatic manner, now being a chief adjunct to the O'Connell sand. The break between the sands is nothing more than a dry shale body and near the center of the field could almost be classed as a continuation of the upper layers.

Start for New Zone

Completion a week ago of Associated Oil Company's Clarke 2 at 8165 feet was hailed as a significant achievement for several reasons and the belief that a well on the extreme edge of the field would be the signal for additional drilling to the Lower Clarke on edge leases was well founded. Several wells have been started for the zone, which should be found considerably shallower in several tests which were failures in the Buckbee sand. Clarke 2 is still flowing about 500 barrels of oil and 600 barrels of water and is by far the deepest producing well in California. The top of the Lower Clarke zone showed water and the well is flowing from perhaps less than 100 feet of good oil sand near the bottom of the hole. When it is considered that the pressure is great enough to flow the well, despite a water condition below the shutoff at 7802 feet, the Lower Clarke zones assumes a very important appearance. The water readily separates from the oil, indicating that the zone will be a satisfactory producer nearer the apex of the structure. Although in the extreme western part of the field, 365 feet of sand and shale was logged. The zone undoubtedly will be heard from later on the inside leases.

Oscar Howard's Hathaway 6, now drilling at 8020 feet, is regarded as one of the most important tests in the field and the outcome of this well is expected to give the Lower Clarke zone another boost. Located on an outside lease in the development of the Buckbee zone, this well may open up a large acreage in the Lower Clarke zone. The gas pressure is very high, the well having shown signs of blowing out from below 8000 feet. With such a long column of fluid, the uneasy state of the well gives it a pressure as great as many of the good producers in the shallower zones. The top of the zone did not show much life but deeper drilling revealed a more uniform condition.

Universal Consolidated Oil Company's O'Connell 5, completed 10 days ago in the Lower Clarke zone at 7650 feet with an initial production of only 700 barrels, was regarded at first as an indication that the formation may prove disappointing on the inside leases. The fact that the oil is clean from the top of the sand and the assurance that the bottom of the formation is better, judging solely from the experience gained in the completion of outside wells, changes the complexion of the well and gives it a chance for big production if drilled deeper. The Lower Clarke has been proved more than 300 feet thick

PASS 8600 FEET

LONG BEACH, Calif.—Shell Oil Company has reached a depth of 8601 feet in Nesa 11 at Signal Hill, making the well unmistakably the deepest ever drilled for oil, and climaxing a series of wonderful records made with rotary equipment in California during the past year. The hole is in perfect condition and will be drilled deeper. The formation is running to alternate streaks of shell, gray sand and shale and is somewhat harder than similar streaks encountered between 7000 feet and 8000 feet.

XUM

on edge leases, so it is considered certain that it will be even thicker on inside tracts.

General Petroleum Corporation's Santa Fe 228, the first completion in the Lower Clarke sand, is not showing much "kick" and it is thought that additional depth would increase production.

The best well of the week was Associated Oil Company's Jordan 2, which came in with an initial production of 9200 barrels from 6850 feet. The oil was 34.4 gravity and failed to show even a trace of a cut. As in the best producers of recent weeks, this well included both the O'Connell and Upper Clarke zones.

Fire

The fire which broke out in the field a week ago has not proved as serious as first reported, but it was sufficient to slow down operations over a considerable radius. The fire started at O. J. Rohde's No. 1 and soon spread to several additional rigs. In addition to the Rohde well, Yorke and Lockhart's No. 2 caught fire and is now the only well burning. Both wells were large producers, the daily loss exceeding 12,000 barrels for several days. Other wells which caught fire and burned for a time were McKeon Drilling Company's No. 1, U. S. Royalty Company's No. 4, McKeon Drilling Company's No. 1, General Petroleum Corporation's Hill 187-B, Graham and Loftus' No. 2, Graham and Loftus' No. 1-A, Wilshire Oil Company's Peterson 2-A, Peterson 2 and Peterson 1-A. Wind machines, similar to those used in making motion pictures, were pressed into service and were effective in fanning the heat back while workmen fought the flames. They consisted of an airplane motor and propeller and were placed about 100 feet from the flames.

Production by Zones

The Buckbee zone has become almost a thing of the past, with only six wells to be completed in the sand within the next few weeks. Production has dropped rapidly and operators are not content to stop their wells in this zone when the O'Connell is available.

Production by zones June 15 was about as follows:

Nordstrum	24,500
Buckbee	33,600
O'Connell	135,000
Upper Clarke	600
Lower Clarke	1,500
Shallow zones	24,000
Total	219,200

The average for the week probably was slightly less, with correct figures not available.

Santa Barbara, Calif.—Western Gulf Oil Company has drilled through about 30 feet of oil sand and shale in Hollister 1, near Point Concepcion, and is ready to test the formation cut between 3090 feet and 3115 feet. A string of 11¾-inch casing has been cemented at 3085 feet. Streaks of gray sand were in evidence, but it is possible that they carry gas and not water.

Santa Barbara Drilling Encouraged By City

Santa Barbara, Calif.—About 50 applications for permits have been made to drill in the new Santa Barbara field and more than half as many rigs have been completed. Nearly all of the locations are active and will be reflected in drilling wells within a few weeks. Few heavy oil fields have attracted such a heavy following in California, but the increased activity is easily accounted for. The oil is found at an unusually shallow depth, locations are welcomed by the City of Santa Barbara and the accessibility of the field has had a marked effect on the location of so many wells. The discovery well was making considerable water when shut in and there is no positive assurance that trouble along this line will not be in evidence in other wells. The oil is very desirable for fuel and the ease with which it is reached and the advantages of all forms of transportation have made the structure a coveted prize. The field is not taken seriously as a market factor, but a large production of heavy crude certainly will not help the situation.

General Petroleum Corporation has taken over all holdings of the Olympic Oil and Refining Company in the field and will carry out the drilling program as originally planned.

The City of Santa Barbara is very lenient with operators who are anxious to develop their holdings and has signified its willingness to maintain and improve streets ahead of development.

Lawndale

Los Angeles.—A few abandonments are beginning to creep into the Lawndale field and many of the idle wells are apparently "out on their feet". The operators are cornered and don't know which way to turn next in a final effort to make the best of the 50 odd wells drilled in the townlot sector. Earl Petroleum Company is plugging back from 7550 feet in No. 1 to test the upper showings around 5850 feet. Standard Oil Company is drilling in gray sand and streaks of oil sand below 7250 feet in Vance 1, now the deepest active test in the field, but the formation is hardly good enough to test. Of the 60 wells started, not more than 20 are now active. Most of the idle wells have been drilled past the level at which production was expected.

Rincon

Ventura, Calif.—An actual test of Richfield Oil Company's Hobson-Fee 1, the discovery well in the deep sand at Rincon field, proved disappointing and probably will not be the immediate cause of additional drilling to such a great depth. The well was completed at 7450 feet and flowed about 150 barrels of 22 gravity oil. The discovery was regarded at first as especially significant, but such a small production below 7000 feet does not give the zone the appearance of a major sand. There is a possibility that other parts of the field may make a much better showing in the zone, however.

Elwood

Santa Barbara, Calif.—Barnsdall Oil Company and Rio Grande Oil Company are again testing Elwood Acres 1, an outpost well near the Elwood field, having plugged back from 5665 feet to 5400 feet for another test of the sand which failed to produce at a different level a few months ago. This well never has shown much promise and the decision to plug back gives the impression that it will not be drilled deeper. The test is more than a mile from the discovery well and its failure does not lessen the value of the field.

Fruitvale

Bakersfield, Calif.—Western Gulf Oil Company, discoverer of the Fruitvale field, has completed Schweitzer 1, Section 27-29-27, with an initial production of 850 barrels from 3880 feet, giving the south side of the field a better appearance and paving the way for additional drilling when market conditions are improved. The oil was 21 gravity and showed a cut of only four per cent. The company's No. B-8 is drilling below 6300 feet, but the formation is showing nothing more than shale and sand.

Mohawk Oil Company completed Red Ribbon 4 with an initial production of 550 barrels. While not an unusual well, the new producer proves a part of the company's lease and makes possible further development.

Kettleman Hills

Coalinga, Calif.—After several months of unusual luck, several operators in the Kettleman Hills field are engaged in difficult fishing jobs. The precision with which wells were carried to 5000 feet gave rise to the belief that drilling in the area would not be as difficult as supposed. At 5500 feet, the extremely hard formation was encountered and no semblance of speed was made below that mark. The time consumed in running in and out of the hole and the small footage made with one bit or core have been the chief reasons for the slower drilling.

Associated Oil Company is fishing for a single joint of drill pipe in Watson 1 and is expected to make the recovery this week. General Petroleum Corporation is still fishing for the three-inch drill pipe in Oschner 2 at 6965 feet, after losing a chance to make the second completion on the north dome. George F. Getty also has a fishing job in Armstrong 1, following an unusually good drilling record to 5682 feet. Milham Exploration Company has broken its perfect record with a trio of drilling wells, having decided to sidetrack the drill pipe in Beal 1, after reaching 5830 feet without mishap.

Standard Oil Company probably has

the best record with drilling wells, all of its 13 tests being in good condition. The wells range in depth from a few hundred feet to 6200 feet. The company has started a gas injection test on Section 11-22-17, into which the surplus gas will be sent. This is one of the first wells ever drilled specifically for gas injection purposes in an oil field.

Potrero

Los Angeles.—Recent completion of two small wells in the City of Inglewood has added to the complexity of the Potrero field. These new producers extended the field fully a mile and practically proved a great intermediate gap. Since the wells completed in the first place were none too satisfactory and the latest extension falls in the same class, operators are at a loss to know just where the main field will lie. The discovery sand has never proved any too dependable and the production trend is still in doubt. The same broken condition which prevails on the southeast flank is in evidence in the townlot section of Inglewood.

Wildcats Idle

Los Angeles.—An occasional suspension among the wildcats of Southern California has reduced the number of active tests, but this inactivity is not regarded as a signal to shut down on an extensive scale. Petroleum Securities Company has abandoned Schwuchow 1, a test north of Torrance, at 5755 feet, after drilling through several streaks of oil sand. The heavy oil sand showed little gas and bordered on a tar formation. Ohio Oil Company abandoned Del Rey 1, Section 22-2-15, two weeks ago at 6210 feet, thus adding another unsuccessful chapter to drilling southwest of the Inglewood field. Several of the wells reported temporarily suspended probably will not resume drilling at all.

Start Four Tests

Coalinga, Calif.—Shell Oil Company has started four test holes on the holdings of the Boston Land Company, about 30 miles east of this city, preliminary to drilling a deeper well at some point on the property. The wells have been numbered "A", "B", "C" and "D" and are located on Sections 24, 26, 27 and 17, the first three in Township 19, Range 18 and the last in Township 19, Range 29, respectively. The company holds leases on the bulk of the Boston Land Company's vast acreage.

Long Beach

Los Angeles.—Richfield Oil Company successfully completed Bernstein 2-A as a 2700-barrel producer from 7555 feet, making it one of the deepest large wells ever finished in the Long Beach field. The oil was 30 gravity and showed only a small cut. Several other small wells were completed during the week but they were not sufficient to offset the natural field decline.

California Gas Waste

Los Angeles.—The natural gas industry in California is anxiously awaiting the outcome of the new gas conservation law, and stands almost unanimously on record against the waste of gas in any field. The production of oil has been the primary object in areas where the waste has been greatest and gas men have had little to say about the policy pursued. They have taken the gas that could be used and have seen the surplus blown into the air. It is felt that a time will come in California when the gas now being wasted will be needed and an actual shortage will result. This question has two sides, however, and only the fact that gas is being wasted may be discussed with precision. Gas wasted at Santa Fe Springs alone totaled 500 million cubic feet daily at one time, and the present surplus is almost as bad.

Santa Barbara County

Santa Barbara, Calif.—The discovery during the past two years of several fields along the Pacific Coast, between Ventura and Point Concepcion, has stimulated wildcatting in Santa Barbara County until it has reached the most active status of recent years. Proof that good fields have been overlooked as doubtful structures has aroused interest in several localities which otherwise probably would not have seen action for many years, and has increased the search for additional structures. The coast strip has been most popular, because three promising fields have been found along this line.

Carbon Black Production Increased Last Year

Washington.—According to a report issued by the United States Bureau of Mines, the carbon black industry continued to set new high records in 1928, establishing new marks for both production and sales. The total production of carbon black in 1928 amounted to 248,790,000 pounds, an increase over 1927 of 50,361,000 pounds or 25 per cent. Total sales for the year were 280,579,000 pounds, an increase of 57,149,000 pounds over 1927.

Stocks of carbon black held by producers at their plants continued to decline and on December 31, 1928, amounted to 50,240,000 pounds, as compared with 82,831,000 pounds on hand at the beginning of the year. The producers estimated that they burned 175,137,000,000 cubic feet of natural gas in 1928, or an average recovery of 1.42 pounds of carbon black per thousand cubic feet. This compares with an average recovery of 1.38 pounds in 1927. Of the total output, 220,532,000 pounds, or 89 per cent, was produced by the channel process and 28,258,000 pounds, or 11 per cent., by the thermatonic, Lewis, roller, disc, and "special" processes. This indicates a slight increase in the proportion manufactured by the channel over a year ago.

The export trade in carbon black continued its rapid growth in 1928. Total exports for that year were 77,903,000 pounds, as compared with 54,431,000 pounds in 1927, an increase of 43 per cent. Louisiana ranked first in production, with Texas second and Wyoming third. Louisiana and Texas, together, produced 95 per cent. of all the carbon black made last year. The output of Texas rose from 56,396,000 pounds to 100,828,000 pounds, an increase of 79 per cent.

Sinclair to Extend Line To Pool in Foard County

Wichita Falls, Texas.—Sinclair Pipe Line Company began essembling materials early last week to extend its pipe line system from Fluhman pool, Wilbarger County, to the new high gravity oil pool uncovered in Eastern Foard County by the Shell Petroleum Corporation on the W. S. Tarver farm. A combination line of three and four-inch pipe about 14 miles in length will be needed to serve the wildcat producer, which is rated at 250 barrels of 40.8 degree gravity at 84 degrees temperature. The oil was found at 2014-24 feet.

Prairie Is Building Line From New Dickey Pool

Wichita.—Prairie Pipe Line Company is building 18 miles of six-inch line from the new Robbins or Dickey field, south of Wichita in Sedgwick County, to its Walnut River station near Gordon, southern Butler County. The estimated cost is $150,000.

There are two wells in the field at present. Shell Petroleum Company, Dickey and Shawver's discovery well on the Robbins farm, in Section 20-28-1e, which is flowing 500 barrels daily, and White Eagle Oil & Refining Company's 100 barrel per day well in the same section. There are about 15 drilling tests in the immediate area.

Marland Refining Company has a two-inch line in the field, which connects with its main line going from Ponca City to the Valley Center pool.

Barnsdall Picnic

Tulsa.—Barnsdall Oil Company employes and their families attended an all-day company picnic in the Sand Spring park June 13th. More than 2000 were present from Rainbow, Oklahoma City, Shawnee, Earlsboro, Seminole, Okmulgee, Bristow, Henryetta, Tulsa, and Barnsdall.

An athletic meet between the teams from the various towns was held, with Raymond Clarke aiding materially to carry the Barnsdall team to first place. Okmulgee won the baseball tournament. A dance ended the annual holiday.

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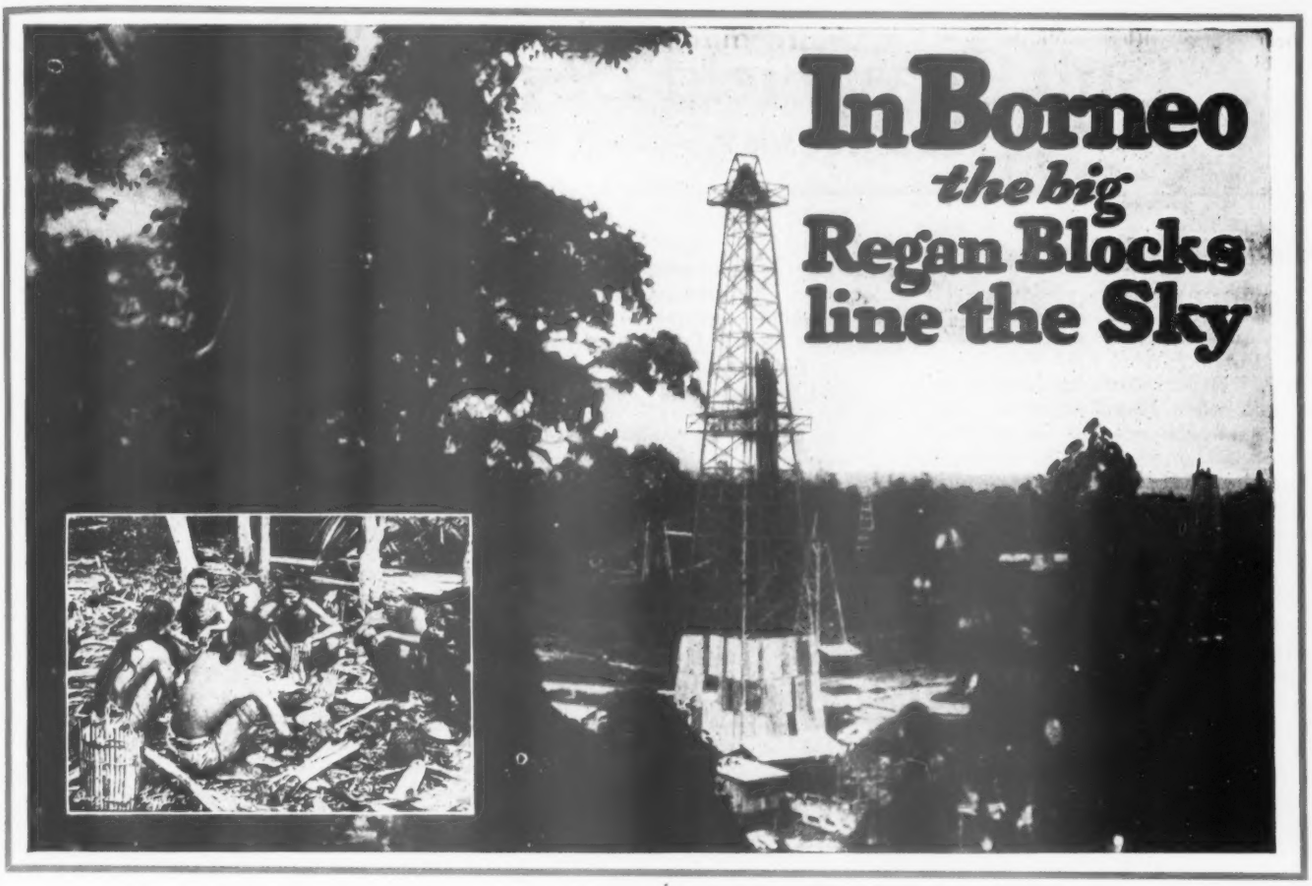

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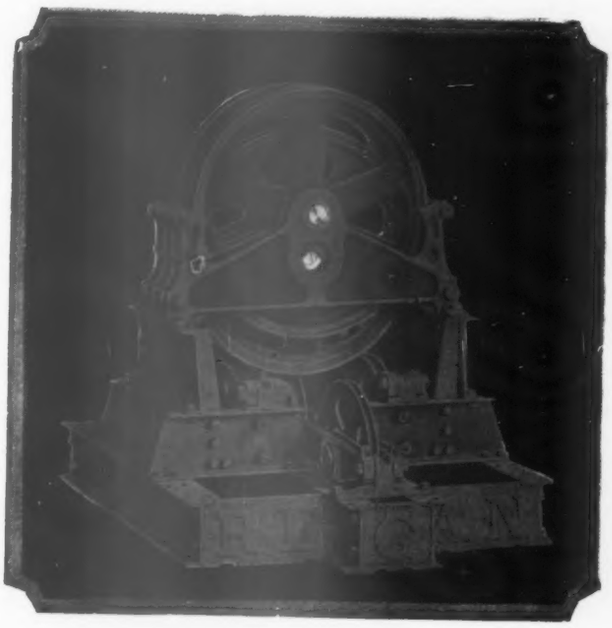

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Gulf Coast Field Developments

JACK LOGAN, *Staff Representative, Houston, Texas*

Twenty-third Consecutive Producer for Sugarland

Houston.—The twenty-third producing well of Sugarland field, Fort Bend County, was completed on Monday of this week when Humble Oil & Refining Company made a 1000-barrel flowing well of Hamner Fee 2 in the south part of the field. Depth of the hole is 3669 feet.

Sugarland field is among the newest in the Gulf Coast, the discovery well having been finished there in March, 1928. The field is practically controlled by Humble Oil & Refining Company. Sugarland has an exceptional record in that no test that has been drilled there has been a failure. Even the first was a producer. The presence of a salt dome was indicated by torsion balance. Present production of the field is around 11,250 barrels daily.

Fannett

Houston.—Gulf Production Company completed two producers during the past week at Fannett dome, Jefferson County. The newer of the two wells is I. R. Bordages A-7, which came in at 5658 feet for 1000 barrels initial production, 33 gravity oil. The other new producer is Thomas 11, finished for 800 barrels daily of 33 gravity pipe line oil at 5650 feet, with the flow pinched in through a one-half-inch choke. In Thomas 11 one joint of screen was set; and the rock pressure of the well is 2000 pounds.

These two are the only producing wells at Fannett, although one other commercial producer has been completed there. That first commercial well was Gulf Production Company's Burrell 2. Bordages A-7 is a south offset to Burrell 2, and Thomas 11, is a west offset to it. Burrell 2 came in about January 15, 1929, making around 3000 barrels per day, and following a fire which raged several days before being extinguished, settled to a daily flow of about 1000 barrels. Several weeks ago this well quit flowing.

Fannett dome is approximately 15 miles southwest of Spindle Top and about 18 miles southeast of Sour Lake. Fannett was outlined by seismograph in 1925, and a large part of the acreage on and around the dome was leased by the Gulf Production Company, the only operator that has drilled there. That company has kept drilling at Fannett consistently, running one or two rigs all the time.

Bordages A-7 is the twentieth test that has been finished at Fannett. Several hit cap rock around 1000 feet, and several went below 5000 feet. In addition to the three commercial producers, there have been two other tests at Fannett which obtained some oil, although not in commercial quantity. Bordages 2 came in at 5052 feet January 20, 1927, flowing by heads, making 50 barrels of 28 gravity oil daily; but died after several days. In September, 1928, Bordages 6 came in at 4760 feet swabbing 135 barrels net oil and afterward was completed as a pumper making 150 barrels daily.

Raccoon Bend Assuming Prominence in Gulf Coast

Houston.—Humble Oil & Refining Company and the Valley Oil Corporation on June 17 finished Sarah Helmuth 1 in the southeast part of the Raccoon Bend field, Austin County, for 500 barrels initial production at 3548 feet.

Raccoon Bend is assuming a prominent place among the fields of the Gulf Coast from the standpoint of production, its daily yield of approximately 6000 barrels being about the same as the daily production of West Columbia, South Liberty, Humble and Goose Creek.

Needville Deep Wildcat Abandoned at 6889 Feet

Houston.—South Texas Petroleum Company has abandoned Winkelman 1, a wildcat test near Needville, Fort Bend County, at 4650 feet. The presence of a dome or structure was indicated there in 1928 through a torsion balance survey. The seismograph, it is reported failed to affirm the finding of the torsion balance; and it was assumed that if a dome actually existed it would be found at a great depth; probably around 6000 feet or deeper.

Winkelman 1 is the second test which the South Texas Petroleum Company has drilled on the Needville prospect. The first was Hartfield 1, which was abandoned about April 15 at 6889 feet, after testing salt water when 30 joints of screen were set at that depth. Hartfield 1 was one of the deepest holes on record in the Gulf Coast. It had several important showings. There was one oil showing at 5000 feet. At 6475 feet there was a showing of gas.

Waller County

Houston.—The Texas Company has abandoned its wildcat test, Young 1, located in Waller County approximately three miles east of the Raccoon Bend field. Depth of the hole is 4011 feet, the bottom of it being in shale.

Deepest Barbers Hill Test Too Far From Dome

Houston.—The deepest hole that has yet been drilled at Barbers Hill was abandoned as a failure when Mills Bennett Production Company and the Moody Corporation quit E. W. Barber 1 in the north part of the field at 6262 feet in a water sand. It has been concluded that the test was a little too far away from the dome to obtain production, all but two or three sands having had water in them.

Although it failed to obtain production, the test has been of great importance, for it penetrated the same sand sections that are found on the productive east flank of the dome, finding the same oil showings, although there was water with the oil. The total thickness of Oligocene formation which the E. W. Barber 1 penetrated was 1200 feet.

At 6198-6202 feet it cored anhydrite, and since it was indicated thereby that the dome had been reached, the previously formed assumption that the test was too far out was ostensibly disproved. It was decided, however, to drill deeper, and the layer of anhydrite proved to be only a thin finger jutting out from the main body of the dome; leaving the original assumption correct.

Humphreys Corporation's Kirby A-8, which will be an Oligocene sand test on the northwest flank of the dome, is drilling at 2865 feet in sand. Republic Production Company's Kirby 1, a similar test on the east flank of the dome, mid-way between the new deep production on the south and east flanks, is in hard lime at 3440 feet.

On the south flank of the dome in that area opened for deep production by Yount-Lee Oil Company, Sun Oil Company is building a pumping unit for Chambers County Agricultural Association 1; while that company's No. 2 is drilling the plug at 5371 feet. Number 1 is 5700 feet deep. In that same section of the field Yount-Lee Oil Company is drilling shale at 6138 feet in Chambers County Agricultural Association 4, and No. 6 on the same lease is down 4985 feet in an oil sand.

In the east flank of the field the following operations are in progress. Mills Bennett Production Company's Smith 1 is drilling shale at 5245 feet, Smith 3 is in lime at 1390 feet, and Hammon 2 has been spudded. Humphreys Corporation's Tarbutton 1 is fishing at 4350 feet, Kirby H-1 is in sandy shale at 3669 feet, and Ilfrey 1 is in sand rock at 1791 feet. Rexal Oil Company's McLean 2 is drilling gumbo and lime at 4000 feet, and Smith 1 is washing to the bottom at 3212 feet Talbot & Markle's Schilling 1 is drilling shale and lime at 4867 feet.

Port Barre Dome

Houston.—Port Barre dome, St. Landry Parish, Louisiana, which was discovered by seismograph and which was opened for its first oil production with the first test drilled on it when The Texas Company's Botney Bay Lumber Company Fee 1 came in as an oil well in February, 1929, was again a center of attention the past week when The Texas Company's No. 2 on the same lease began making oil and gas.

This second test came in flowing at the rate of about 2000 barrels daily and making what was estimated at 5,000,000 feet of gas, with two joints of screen set at 3618 feet. After flowing for less than an hour, however, the well died, and it is now waiting on orders.

To a certain extent this was a repetition of the performance of the first test. Botney Bay Lumber Company Fee 1 came in at 3763 feet showing 7,000,000 feet of gas and producing 23 gravity pipe line oil at the rate of 800 barrels daily. Shortly afterward, however, it quit flowing. The well was subsequently deepened to 3799 feet where it tested salt water, and drilled down to 3933 feet later, it went into salt and was abandoned in salt about 50 feet deeper.

The first test was located 8100 feet south and 3200 feet west of the northeast corner of T-6s, R-5e in Section 4; and the second test is about 150 feet south of No. 1.

On the same dome Gulf Refining Company of Louisiana, which has extensive acreage there, is setting casing at 3800 feet to test an oil-showing sand at 3830 feet.

Skid Derrick for Third Mykawa Test

Houston.—Humble Oil & Refining Company's W. H. Irvin 1, the second test on a torsion balance prospect at Mykawa, Harris County, has been junked and abandoned at 3810 feet, and the derrick is being skidded over to a new location.

This test, Irvin 1, is 2200 feet north and 10 degrees east of Humble Oil & Refining Company's Minnetex 1, the first test of the area. Minnetex 1 was abandoned in shale the latter part of March, this year, after attaining a depth of 5811 feet. That test had had an oil show around 5500 feet, but when several joints of screen had been set the well flowed salt water and was subsequently deepened.

Vermilion Bay

Houston.—The third test on the Vermilion Bay salt dome, Iberia Parish, Louisiana, was finished last week when The Texas Company abandoned Vermilion Bay A-3 at 4700 feet. Location of the test is 15,836 feet west and 13,041 feet south of the southeast corner of Section 20-15s-6e, in Vermilion Bay.

The Texas Company acquired its leases on this dome from the Louisiana Land & Exploration Company last November along with leases on nine other domes. The test that has just been abandoned was started by the Louisiana Land & Exploration Company before the deal was made with The Texas Company. The Louisiana Land & Exploration Company had previously finished two tests on the dome. Vermilion Bay A-1, the first test drilled there, proved the existence of the dome, which had previously been indicated by seismograph. It drilled into salt at 810 feet and continued to core ahead in the salt for about 200 feet. The third test Vermilion Bay A-3 is 4000 feet south and 3700 feet east of the first test. The second test there, Louisiana Land & Exploration Company's Vermilion Bay A-2, was also abandoned in salt, which it topped around 3700 feet.

Salt Flat Production Over 50,000 Barrels

Houston. — For the first week in its history, the Salt Flat field during the week ending June 15 exceeded 50,000 barrels in average daily production for a week: the yield for that period, according to the American Petroleum Institute estimate having been 50,200 barrels daily.

During that same period nine tests were completed in the field; of which six were Humble Oil & Refining Company wells. A. A. Buchanan et al abandoned Trap Briscoe 1 in the extreme north end of the field at 2977 feet. Shell Petroleum Corporation finished New 5 for 125 barrels at 2753 feet. The Texas Company's Merriweather 9 in the south part of the field swabbed 60 barrels in 24 hours at 2721 feet, and will be put on the pump. Humble Oil & Refining Company completed the following producers: M. Briscoe 3-A for 500 barrels at 2705 feet; Briscoe 1-B for 200 barrels at 2704 feet; Moses & Bargett 4-B, 350 barrels at 2704 feet; Clynt Smith 1-B, 100 barrels at 2538 feet; J. R. Tiller 4-A, 700 barrels at 2703 feet; and J. D. Wright 3, for 50 barrels at 2703 feet.

Humble

Houston. — The Texas Company's Wheeler & Pickens 21 in the new deep sand area in the southeast part of the Humble field, Harris County, is blowing dry gas from 4298 feet; eight joints of screen were set in the well. The same company's Landslide 262, which came in for 500 barrels at 4942 feet recently but shortly afterward quit flowing, is now drilling shale at 5070 feet; Landslide 263 is drilling shale and boulders at 4565 feet; Landslide 264 is drilling shale at 3882 feet; and Landslide 265 and 266, Stevenson 40, Carroll Oil and Gas Company 29, and Koehler 35 are derricks. Humble Oil & Refining Company's Williams 1 is flowing salt water. Marland Oil Company's Lee 1 is drilling shale at 3970 feet. South Texas Petroleum Company's Morris 5 is drilling shale at 4534 feet; Morris 6 is drilling hard lime at 3925 feet; Bert 1 is drilling at 5104 feet in sticky shale.

Hankamer Dome

Houston.—Gulf Production Company's Boyt 1, the discovery well of the Hankamer dome, southern Liberty County, is shut in on account of lack of storage; and the company is rigging up for its second test, Boyt 2, located 600 feet due north of No. 1. Oil that has already been produced by Boyt 1 will be used in drilling No. 2.

Hackberry

Houston.—There were two completions, one producer and a failure, during the past week in the Old Hackberry field, Cameron Parish, Louisiana. Progressive Oil Company's Little 1, located in Section 28-12s-10w, was completed for 100 barrels of pipe line oil at 3304 feet, and Cameron Oil Company and Rycade Oil Corporation's Vincent 2 was abandoned at 3454 feet.

Production of the old Hackberry field during the past week was 2500 barrels daily.

Blue Ridge

Houston.—The greatest amount of new oil recorded by any field in the Gulf Coast during the past week was 3400 barrels from two wells at Blue Ridge; both of those wells having been deepened from higher levels. Sinclair Oil & Gas Company's Davison 4 came in for 1500 barrels at 4355 feet; and South Texas Petroleum Company's Davison 1 was completed after deepening to 4375 feet for 1900 barrels initial production.

Orange County

Houston. — On Monday of this week The Texas Company's Kuhn 1, discovery well of a new Coastal dome in Orange County, north of Port Neches, produced 504 barrels of net oil. It has been holding up to approximately that rate for several weeks. Canals are being dredged by The Texas Company to several new locations which will be drilled on the Orange County dome.

Gulf Moves Houston Offices

Houston. — Gulf Production Company, Gulf Refining Company and Gulf Pipe Line Company, have moved their offices across the street from the building in which they have heretofore been located to the new Gulf Building, Main Street and Rusk Avenue. The work of moving was started late last week and was finished early this week. The Gulf Companies' offices occupy 12 floors of the new building, eight to 19 inclusive.

The new Gulf Building is said to be the tallest in the South, having 37 floors and a total height of 440 feet. Besides the Gulf Companies, several other oil concerns and individual operators will have offices in the new building.

XUM

Louisiana-Arkansas Field Notes

Active Wells in Caddo Extension Increased to 18

SHREVEPORT. — Despite the fact that Gulf Refining Company's Pope Oden 1, in the extreme NE corner of Section 18-19-14, Caddo Parish, has dropped to 715 barrels per day, locations continue to be made in the new Dixie extension of the Pine Island field. Five new locations made during the last week brought the total of locations and operating rigs in this area to 18.

Chief interest in the new extension area is centered in Ohio Oil Company's Hunter Estate 1, Section 17-19-14, a northeast offset at approximately 900 feet to Standard Oil Company of Louisiana's Hunter Estate 1, in the same section, which is the discovery well of the new district. The Ohio Oil Company's offset was to be bailed Tuesday, liner having been set after a core of black shale was obtained at 2414 feet. Six and five-eighths-inch casing was set at 2375 feet. This test is approximately 100 yards south of Standard Oil Company of Louisiana's Hunter Estate 2, in SE SW of Section 8-19-14, which is making 67 barrels of oil daily on the beam.

Dixie Oil Company is running a four-inch gathering line to the location of Ohio Oil Company's test.

Gulf Refining Company's Pope Oden 2, in SE NE Section 18-19-14, a southern offset to the same company's Pope Oden 1, was put on the beam and made 58 barrels for the first 12 hours. Monday the yield had dropped to 20 barrels daily.

Standard Oil Company of Louisiana's Hunter Estate 1, in NW NW Section 17-19-14, the discovery well of the field, is down to 22 barrels daily under pressure. The same company's P. W. Oden 1, in Section 18-19-14, is now down to approximately 200 barrels daily, still flowing.

South of the producing wells, the D. C. R. Oil Company has derrick up for Oden 1, in NE NW Section 20-19-14. Lide and Davidson have derrick pattern for Oden 1, in NW NE Section 21-19-14. Walter Ray and associates have derrick pattern for Hunter 1, in Section 8-19-14. Standard Oil Company of Louisiana has derrick up for Henderson 2, SE SE Section 7-19-14, and is rigging up for Hunter Estate 5, NW NW Section 17-19-14. Gulf Refining Company has derrick up for Pope Oden 3, and has derrick pattern for Pope Oden 4, both in Section 18-19-14.

Big Richland Gas Well

Richland Parish's gas field leaped into the limelight during the last week when North Louisiana Gas Company's Boykin 1, in SW SE of Section 20-17-6e, blew in from 2350 feet and cratered. While no accurate gauge was secured of the well, it is estimated at 72 million to 80 million cubic feet daily, with approximately 1300 pounds rock pressure. This well was checking approximately 100 feet above other wells in the area and preparations were being made to set a string of six-inch casing when the blowout occurred. First intimation that gas had been encountered came when gas began to escape between the 12-inch and 8-inch casing. This well is a slight extension of the gas producing area northeast. There is only one producing gasser further north. That is Palmer Corporation's Colvin 1, in NW NE of Section 33-17-16, completed at around 2450 feet, making 19 million cubic feet with a rock pressure of 1180 pounds.

Monday morning the well had still defied efforts to bring it under control. The blowout occurred late Friday. The new gasser is in a center of new development that has recently been started by the Palmer Corporation and several other companies.

In the extreme southeast part of Richland field, Southern Carbon Company's Tegola 1, in the southeast corner of Section 4-15-6e, came in at total depth of 2458 feet and gauged 48 million feet of gas. This well is approximately a quarter of a mile east of nearest gas production. Six-inch casing was set at 2288 feet.

Results of a recently launched series of tests in the southeastern part of Champagnolle field appear to have been fruitful. Pure Oil Company's M. H. Nash 1, in NW SW Section 7-17-13, tested 45 joints of oil in a drill stem test in nine minutes from 3035 to 3040 feet. Six and five-eighths-inch casing was set at 3035 feet. Later the well came in flowing 705 barrels in the first 22 hours through a 3/8-inch choke. The oil tested 32 gravity, and unlike most of the wells of that area, is almost free of water and basic sediment. Another feature of the well is the fact that a working pressure of 620 pounds is evident.

Champagnolle Test Shows

In the same section, Ohio Oil Company tested eight million cubic feet of gas in drill stem of its M. H. Nash 1, from 3079 to 3086 feet. Lion Oil and Refining Company is ready to drill plug in El Dorado Realty 1, in the same section, 6 5/8-inch casing having been set at 3013 feet with total depth of 3027 feet. Bailey and Trimble are waiting orders with drill stem stuck at 768 feet in El Dorado Realty 1, in the same section. Magna Production Company bailed salt water in a third test of El Dorado Realty 2-B, in Section 8-17-13, a quarter of a mile east of production. This hole has total depth of 3084 feet. The test may be deepened.

Bradley County, Arkansas, scene of a number of wildcat operations, has added another failure, Phillips Petroleum Company and associates' J. W. Kline 1, in Section 28-16-12, being abandoned as a dry hole in red beds at 2902 feet. The red beds were topped at 2860 feet.

Dixie Oil Company is trying to cut a core in Robertshaw 92, in Section 13-21-15, Caddo Parish, Louisiana, at a depth of 6158 feet. This deep test is dividing interest now with another deep hole, the latter in Cotton Valley, Webster Parish. This is Magnolia Petroleum Company's McCook and Hibbler 1, in Section 22-21-10, which is drilling lime with streaks of shale at 5994 feet.

An interesting wildcat development of the Sabine Parish field near Zwolle, Louisiana, was a showing of 100,000 cubic feet obtained at 3429 feet by A. H. Tarver in Long-Bell Lumber Company 1, in Section 29-8-13. Tarver is now coring ahead at 3431 feet.

Four North Louisiana wildcats were listed in the column of failures during the week. Magnolia Petroleum Company abandoned B. M. Cook 1, in Section 2-22-11, Bossier Parish, as a salt water hole at 3315 feet total depth. Standard Oil Company of Louisiana went to 2616 feet before abandoning Hunter Estate 4, in Section 17-19-14, Caddo Parish's new extension area, as a dry hole. Carter and Collins have abandoned Ball Lumber Company 1, in Section 29-7-1w, Grant Parish,

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News From Rocky Mountain Fields

as a dry hole at 2410 feet. W. J. Garnier's wildcat, Bowman-Hicks 1, in Section 12-7-12, Sabine Parish, was also abandoned at 625 feet, no casing having been set.

Besides the tests announced for Caddo Parish wildcat field, there were 12 other locations made in North Louisiana. Wildcats included a new test for the White Sulphur area of La Salle Parish, where several wells two years ago showed up as good for five or ten barrels daily around the 700-800 foot level. The new test is Tunica Petroleum Company's L. and A. 47, in SE NE Section 17-7-2e, where derrick is being built. W. M. Kemp and associates announced location for Campbell 1, in northeast corner Section 11-22-10, Webster Parish. El Dorado Chief Oil Company has derrick up for Dance 1, in Section 27-20-7w, Claiborne Parish.

East Texas' three new locations announced during the week were in the Panola County gas field.

Only one of four new locations for South Arkansas was a wildcat test. This is John Stark and associates' Ainsworth 1, in NW NE Section 8-19-16, Union County, where derrick pattern is in.

Root Refining Co. Buys Production in Smackover

Shreveport, La.—Root Refining Company has bought from the Amerada Petroleum Corporation five 40-acre tracts in the Smackover producing field in Ouachita and Union Counties, Arkansas, it was announced by C. P. Hamilton, president of the Root Refining Company. These tracts have 21 producing wells with a combined daily yield of between 600 and 700 barrels.

Root Refining Company also bought one 40-acre tract in Smackover with five producing wells and about 150 barrels daily yield from E. N. Wood, trustee, for the Continental Supply Company. The total involved in the two transactions was over $250,000.

Lincoln County

Tulsa.—J. V. Bailey et al's House 1, C NE SE Sectin 15-16-4e, wildcat south of Agra in Lincoln County, Oklahoma, topped the Wilcox sand at 4616 feet and at 4628 feet found water. It is drilling ahead.

Tulsa.—Westheimer and Daube's No. 10, Section 19-5n-8e, Allen field, filled up 3000 feet with water from the Wilcox sand at 4256-67 feet. This test, located east of the present drilling to the Wilcox sand failed to find production in the regular Cromwell sand and was deepened to the Wilcox.

Attempting Shut-off

Farmington, N. M.—Continental Oil Company is still engaged in an attempt to shut off the salt water flow in its well on Rattlesnake structure, New Mexico. This well is the deepest test in the territory, being bottomed in the Pennsylvanian at 6771 feet, where it is producing a total of about 600 barrels of high grade crude per day. It is located a very short distance from the Utah line.

Test to Drill

Gebo, Wyo.—An interesting wildcat in Hot Springs County, Western Wyoming, is that which is to be drilled by the Gebo Consolidated Oil Company west of this town. Exact location has not been announced, but the territory has long been considered favorable.

Hiawatha Dome

Denver.—An important wildcat test to be drilled by The Texas Production Company is that starting up on the Hiawatha Dome, northwestern Moffat County, Colorado, not far from the Wyoming line. This well is southwest of the proved gas area of the structure, and is on a distinct "high", not to be associated with the Hiawatha structure itself.

GEORGE A. SCHWAB

land and scouting departments of the Barnsdall Company, Tulsa, and who last week was elected chairman of the Board of Directors of the Mid-Continent Oil Scouts and Land Men's Association. Schwab will largely direct the work of the association during the coming year and is outlining a constructive policy.

Abandon Test

Great Falls, Mont.—The Ohio Oil Company has had another wildcat failure in Montana in its No. 1 Coghill on the Brady structure, Southern Sweetgrass Arch, where it found sulphur water at 1885 feet. The well will be abandoned.

Diamond Anticline

Casper, Wyo.—The Midwest Refining Company is moving in to a location on Diamond Anticline, about eight miles southwest of the town of Rock River, in Albany County, Southeastern Wyoming, for a wildcat well which is to be drilled immediately. This structure has never been drilled before.

Shale Refining

Craig, Colo.—Shale Oil and By-Products Corporation of Chicago has recently unloaded two carloads of building material and equipment at this place for use in the construction of the company's shale oil refinery which is to be located below Rangley. The plant is to be in operation within about 90 days, it is said.

Craig, Colo.—McLaughlin et al have a very interesting wildcat well on a structure which lies between Iles dome and the Morapos gas field, south of this town about 22 miles. The well is at present drilling in the Dakota, and about 20 feet above this horizon there was a very encouraging showing of gas and oil.

Tulsa.—Twin State Oil Company's Penny 1, SE SW SE Section 25-19-4e, is rigging up for a test. It is located two miles south of Olean and two miles east of Ingalls in Payne County, Oklahoma.

Morton County, Kansas, Will Have Test Drilled

Wichita.—The first test to be made for oil or gas in Morton County, southwestern Kansas, will be Chaney and White's of Tonkawa, Okla. A location has been made on the Foster Elliott farm, in the C NE SE Section 11-34-40w. The test is located on a 30,000-acre block.

New Oil Field Discovered In West Shackelford

Breckenridge, Texas. — Western Shackelford County accounted for a new oil pool late last week when the wildcat test of Frank A. Oyster, Byron Rife and C. B. Taylor, all Abilene operators, on the Davis Brothers' ranch swabbed 65 barrels of high gravity oil on first 24 hour gauge from saturated lime at 1604-08 feet, with a total depth of 1611 feet. This wildcat is located at the center of the SW¼ of NE¼ section 15, block 14, T&P Ry. survey, and pipe line connection has been provided by the Humble Pipe Line Company. The owners are rigging up to pump their discovery well.

Semi-wildcat territory in Northern Eastland County contributed a light producer from the partially completed test of the Hoffer Oil Corporation-J. Elmer Thomas and associates on the Gray farm late last week with a natural flow of 115 barrels of 39 degree gravity oil during first 13 hour gauge. Its production comes from Eastland sand at 3446-51 feet. This test is located in the NE¼ of section 485, S. P. Railway survey, about five miles due north of Cisco. It logged the Caddo lime horizon at 3280-3376 feet. A string of 5-3/16-inch casing is being run to deepen.

Tulsa. — Darby Petroleum Company's Nixon 1, SWc Section 9-7-4, important test in the Pearson-St. Louis district, topped the Sylvan shale at 3875 feet and the Viola lime at 3948 feet. It is drilling ahead. This well is a direct north offset to Independent Oil & Gas Company's Rhodd 1, Simpson sand producer.

Texas Company Pumping Oil From Lea County

Artesia, New Mexico.—Having completed its 37,500-barrel storage tank, The Texas Company began pumping its Bertha Lynch wildcat oil producer in Section 34-20s-34e, Lea County, early this week, giving the county its largest oil producer. This well pumped 992 barrels of clean oil during 24-hour gauge ending at noon Sunday. Production is coming from lime at 3722-31 feet. The Texas Pipe Line Company is to shortly build a six-inch line to this well from its Jal pump station, a distance of about 38 miles, with extension lines to other completed and drilling tests in this general section of the county.

Magnolia Petroleum Company is a new entrant into Lea County, having ordered materials for the drilling of Martha Lindley 1, an offset to the 390-barrel producer being operated by the Skelly Oil Company on the Joiner permit near Jal.

In order to take advantage of the idle storage room offered by two completed 55's at its Jal station, The Texas Pipe Line Company has been pumping West Texas crude north into this tankage for several weeks pending the starting of oil through its trunk line to Houston next week.

Shreveport Geologists Go East on Field Trip

Shreveport, La.—One of the best trips ever staged by the Shreveport Geological Society was the verdict of 39 geologists who made the society's annual trip last week-end. The trip took the group through parts of Tennessee, North Alabama and North Mississippi.

Outcrops of all the geological formations which are expected to prove productive of oil or gas in those regions, as well as of many formations that may be productive of deeper drilling in Louisiana, were studied.

Leaving Memphis, Tennessee, Friday the party went by bus to Savannah, Tennessee, where Friday night was spent. Saturday the group continued to Muscle Shoals and thence to Tupelo, Mississippi, where the members spent Saturday night. Sunday they motored to Oxford, seat of the University of Mississippi and returned to Memphis Sunday night, proceeding home by train.

The following made the trip: E. N. Lowe, state geologist, Oxford, Mississippi; F. A. Bush and J. Minto, Sinclair Oil & Gas Company, Tulsa; M. C. Israelsky, Palmer Corporation, Shreveport; W. F. Chisholm and W. E. Nash, minerals division Louisiana Conservation Commission, Shreveport; J. F. Hosterman, Amerada Petroleum Corporation, San Angelo, Texas; T. E. Morrison, Humble Oil & Refining Company, Houston; Dugald Gordon, Brokaw, Dixon, Garner & McRae, Shreveport; A. E. Oldham, Amerada Petroleum Corporation, Tyler, Texas; D. R. Snow, Barnsdall Oil Company, Tulsa; E. B. Hutson, Standard Oil Company of Louisiana, Shreveport; W. P. Madden, Federal Petroleum Company, Shreveport; C. C. Clark and J. B. Sasse, Shell Petroleum Corporation, Dallas; Miss Dollie Radler, Amerada Petroleum Corporation, Tulsa; Miss Frances Charlton, Pure Oil Company, El Dorado, Arkansas; Miss Fanny C. Edson, Shell Petroleum Corporation, Tulsa; Don Davers and H. S. Clark, Sinclair Oil & Gas Company, Fort Worth; S. A. Packard, Louisiana Oil Refining Corporation, Shreveport; R. A. Moore, Louisiana Oil Refining Corporation, Jackson, Mississippi; E. G. Morehead, Simms Oil Company, Shreveport; D. C. Shay, Arkansas Natural Gas Corporation, Fort Smith, Arkansas; C. L. Bartlett, Sun Oil Company, Dallas; W. B. Rowland, Louisiana Land and Exploration Company, Houston; G. R. Stevens, Simms Oil Company, Shreveport; S. P. Borden, Shreveport; M. W. Grimm, Tidal Oil Company, Shreveport; J. L. Walters, Louisiana Oil Refining Corporation, Shreveport; R. D. Norton and G. W. Schneider, The Texas Company, Shreveport; C. L. Rankin, Humble Oil & Refining Company, Shreveport; F. X. Bostick, Southern Crude Oil Purchasing Company, Shreveport; F. B. James, Ruston Drilling Company, Ruston, Louisiana; D. V. Blocker, Gulf Refining Company, Shreveport; J. S. Ivy, Palmer Corporation, Shreveport; R. E. Bremer, The Texas Company, Meridian, Mississippi; and J. L. Ferguson, Amerada Petroleum Corporation, Tulsa.

Cooke County Wildcats Being Completed

Wichita Falls.—Two wildcat oil producers in Cooke County were in process of completion early this week, and indications are favorable for this section of the North Texas district to register a substantial gain in field work within the next few weeks.

Fain-McGaha Oil Corporation's J. F. Huggins 1, located in the northeast part of Section 9, Southern Pacific Railroad Survey, and north of Muenster, developed hole full of oil from sand at 1181-1189 feet, with promise of making a 50-barrel pumper.

This well opens a new pool about 2½ miles southeast of the Bulcher field.

The second strike for the week in Cooke County was made within one mile northeast of Muenster by Benson Brothers and American Refining Properties' Haverkamp 1, which filled several hundred feet with oil from sand at 754 to 760 feet.

Shell Petroleum Corporation's wildcat producer on the Tarver land, which was reported last week as having established a new oil pool in northeastern Foard County from saturated lime at 2014 to 2024 feet, was flowing 140 barrels daily at last reports. Sinclair Pipe Line Company is at work on a pipe line to service this new producing area.

Texas Gas Will Be Piped To Monterrey, Mexico

Houston.—Contracts have been signed by the United Gas Company with Smith Brothers Construction Company of Dallas, to lay a gas trunk line, extending from Jennings field in Zapata County, Texas, direct to Monterrey, Mexico. The line will cross the Rio Grande at Roma, Texas, and proceed from that point in practically an airline to Monterrey, the greatest industrial center in northern Mexico.

The line will be laid with 12¾-inch (O.D.) pipe from Youngstown Sheet and Tube Company. Delivery of the pipe is promised to commence within 10 days. The right-of-way for the entire line has been secured and much of it in Mexico has been cleared for pipe laying machines.

United Gas Company, which is under Moody-Seagraves management, has fully organized under all the requirements of Mexican law, an operating subsidiary, Cia. Mexicana de Gas, S. A. This company will operate as a transporting company, selling the Texas gas to the local distributing company at Monterrey for domestic consumption. In addition to this service, Cia. Mexicana de Gas, S. A. has signed contracts to supply gas to many industrial enterprises at that place.

XUM

Salt Flat Reaches Peak Production in May

Luling, Texas. — Having maintained a daily output of 45,661 barrels during the month of May, Salt Flat field has apparently passed its peak in monthly production. The high mark on field work was passed in May when a total of 39 wells were entered on the completion list, while only 37 new locations were staked during the same period.

Even though production has been mounting to a new peak monthly, the crude market situation in this field has been tight from the very beginning, and two independent purchasers—Petroleum Pipe Line Company and Sun Oil Company—have run all oil produced by the 11 independent producers, while runs by Humble Pipe Line Company, Gulf Pipe Line Company, Shell Pipe Line Company and Magnolia Pipe Line Company have been restricted to their own controlled oil, except for the latter concern, which is serving as common carrier for oil taken from The Texas Company and Atlantic Oil Producing Company. Petroleum Pipe Line Company and Sun Oil Company have been marketing all of their crude runs in tank cars, but the former started delivering a portion of its daily runs during the first week in June to the new Luling skimming plant, (rated at 2000 barrels daily), of the Central Texas Refining Company, which has also been purchasing Salt Flats crude for its plants at Minerva and Angus, Texas.

A third direct pipe line outlet from the Salt Flat field was put into service in May, when the Humble Pipe Line Company began operating its eight-inch carrier to West Columbia at a capacity of 12,000 barrels daily, but with the completion of two intermediate pump stations on this line, the capacity will be increased to 20,000 barrels daily. Shell Pipe Line Company has a six-inch carrier extending from its field station to a point near Austin, where connection is made with its McCamey-Houston 10-inch system, while Magnolia Pipe Line Company's line is an extension from the old Luling field. Shell Pipe Line Company shipped 41,390 barrels of crude during May in tank cars, in addition to regular pipe line shipments, while Gulf Pipe Line Company is credited with having shipped 383,225 barrels in tank cars, or slightly more than was produced by Gulf Production Company during May. Humble Pipe Line Company handled 521,974 barrels during the month from leases developed by Humble Oil & Refining Company, but only shipped 86,350 barrels in tank cars, with the remainder going through line, or to local storage tanks. The Petroleum Pipe Line Company, which maintains headquarters in the Magnolia Building, Dallas, made its heaviest shipments during May, having dispatched 72,732 barrels in tank cars to refineries at Angus, Minerva and Texas City.

Total tank car shipments for May amounted to 650,500 barrels, or at an average rate of 20,984 barrels daily.

LULING DISTRICT—SALT FLAT POOL
PIPE LINE RUNS, MAY, 1929

Company	Lease	Bbls.	Total
Petroleum Pipe Line Company—			
Cranfill & Reynolds	Smith	27,205	
	Jackson	1,490	
	Northcutt "A"	4,275	
	Northcutt "B"	9,206	
	Hanson	14,836	
Nash, Windfohr & Perry	Davis "A"	1,301	
	Davis "B"		
	Wilson	12,714	
Atlantic et al	Davis	2,363	73,389
Magnolia Pipe Line Company—			
The Texas Company	Merriweather	18,734	
	New	2,781	
Atlantic et al	Davis	509	22,024
Gulf Pipe Line Company—			
Gulf Production Company	R. W. Carter	70,307	
	O. Connelly	57,449	
	J. J. Davis	10,551	
	Jim Smith	1,319	
	W. L. Smith	24,785	
	Martin Tiller	56,893	
	Allen & Tiller	13,882	
	J. D. Wright A.	105,807	
	J. L. Northcutt	35,889	379,882
Sun Oil Company—			
Abercrombie & Harrison	C. I. Moses	19,091	
M. K. Townes	Hickman	10,666	
Sun Oil Company	Cora Malone	17,196	
Golden West Oil Company	J. Wilson	7,804	
	Malone	2,249	
Turman & Brown	Jackson	2,716	
	Bridges	1,094	
Carl Bros. et al	Cora Malone	2,464	
Forest Oil Company	Fleming	1,433	
	Bridges	1,166	
The Victor Company	K. Golding	154	
	Walker	516	
W. F. Morgan	Cora Malone	344	66,893
Humble Pipe Line Company—			
Humble Oil & Refining Company	W. O. Allen	18,279	
	M. Briscoe "A"	25,034	
	Trap Briscoe	1,935	
	J. J. Davis No. 1	2,069	
	J. J. Davis No. 2	7,565	
	W. F. Davis	1,677	
	Floy Gray 83 A.	16,679	
	Floy Gray 48 A.	14,742	
	L. G. Hanson	24,712	
	Moses-Baggett A	61,027	
	Moses-Baggett B	74,832	
	M. B. Johnson A	17,980	
	M. B. Johnson B	12,096	
	J. B. Tiller	17,096	
	J. R. Tiller No. 1	15,922	
	J. R. Tiller A2.	15,859	
	J. R. Tiller C	4,541	
	J. R. Tiller B	12,789	
	J. D. Wright	14,646	
	T. A. Tiller	46,404	
	Wm. Smith	17,994	
	Clyant Smith	695	
	J. L. Northcutt A	54,788	
	J. A. NorthcuttA	6,275	
	Addie Hinds	35,979	
	C. F. Dye	11,793	521,974
Shell Pipe Line Company—			
Shell Petroleum Corporation	R. W. Carter	12,354	
	C. F. Dye	19,962	
	R. W. Malone	22,712	
	Wm. Moses	43,193	
	G. W. New	31,615	
	Clyant Smith	9,533	
	Jim Smith	2,658	
	W. L. Smith	1,944	
	Wm. Smith	68,006	
	Floyd Tiller	139,348	351,325
Total		1,415,487	1,415,487
Daily Average for May, 1929		45,661	45,661
Daily Average for April, 1929		40,853	40,853

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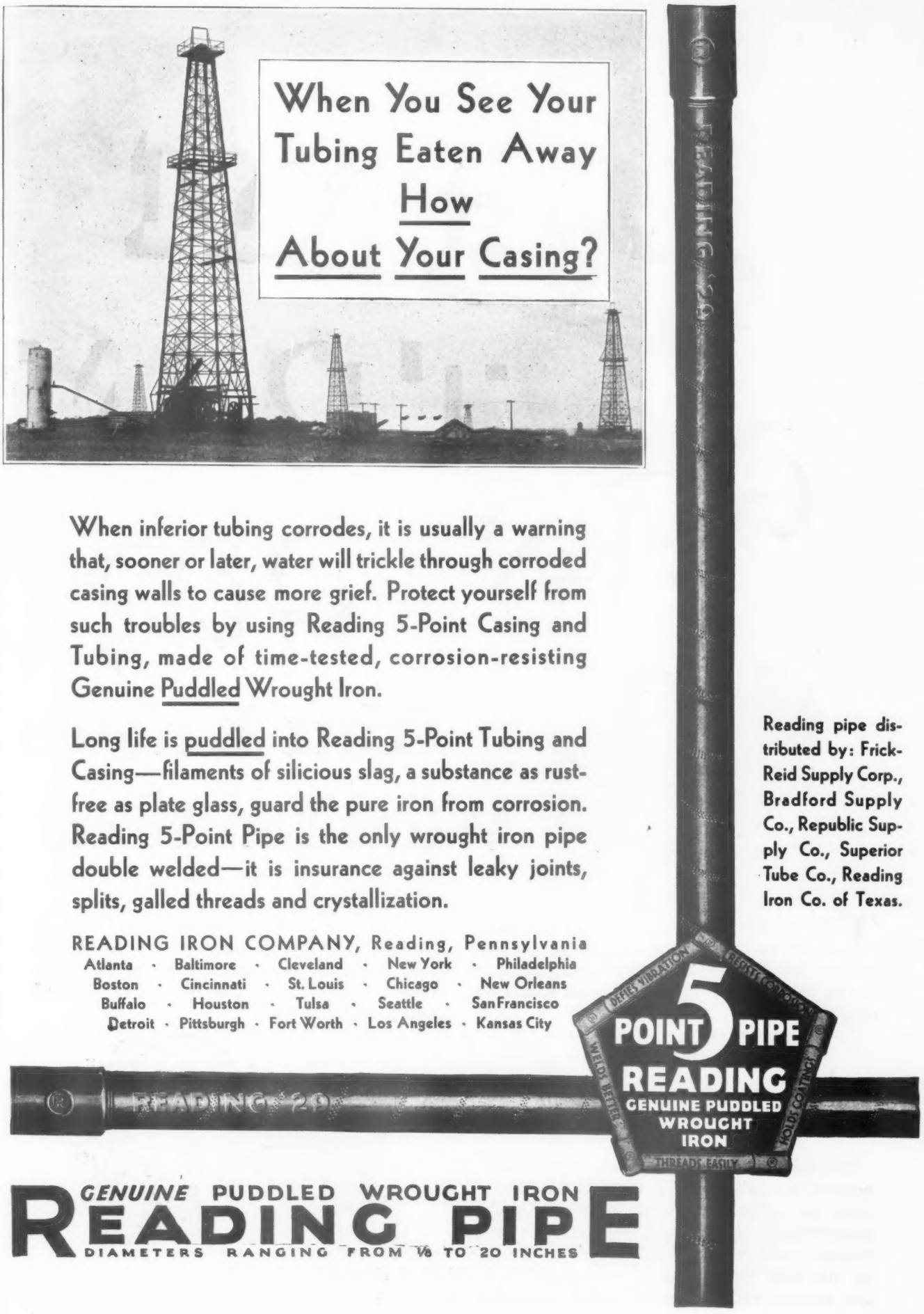

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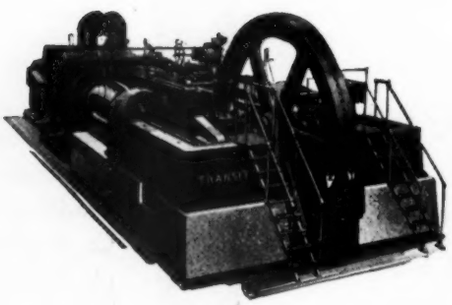

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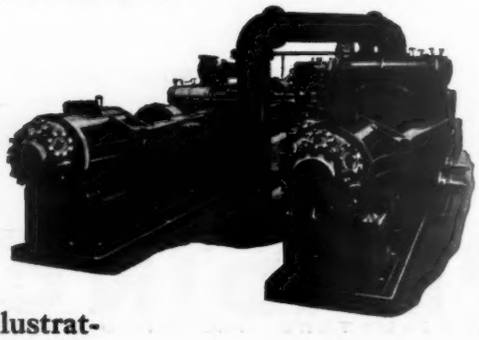
The whole question is one of local conditions, and you, of course, know them better than anyone else.

Once it has been decided to use steam power, we take a great deal of satisfaction in offering, recommending and guaranteeing the 26&60x60″ cross compound, condensing, steam driven gas compressor illustrated on this page. All this because this outfit is giving the utmost satisfaction in actual compressing service.

There are localities where good coal or fuel oil is so cheap and so easy to obtain that consideration may well be given to conserving natural gas for more refined and profitable uses.



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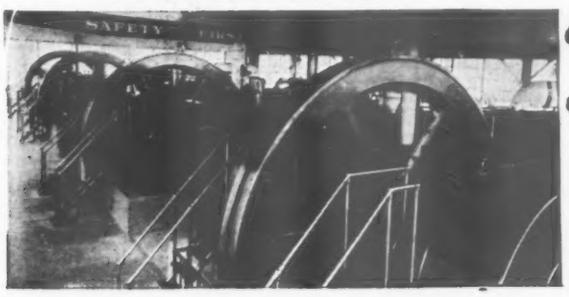

and they enthuse about them.

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Australia Searches for Oil

(*Continued from page 26*)

examined indications for oil discovery are regarded as so encouraging that many corporations are operating along the coast. The commonwealth government is giving every assistance, even to conducting an aerial survey of regions difficult to penetrate, owing to the thick tropical vegetation.

As far back as 1911 definite indications of petroleum were reported at Upoia, near the Vailala River, in Papua. Acting on reports of geologists, the government dispatched an oil expert to sink trial holes on the site. In 1913 a small quantity of oil was obtained from a shallow well, and various attempts have been been made since to exploit the deposits, so far without success. The government continued operations for years and put down 10 holes. Oil was definitely proved to exist, and about 2000 gallons of light (high-Baume) oil was recovered. But it was found that the structures were too broken to allow good fields to be developed. Government activities were then shifted to Popo, some 60 miles to the east of Upoia.

Anglo-Persian at Popo

At Popo, starting in 1919, the Anglo-Persan Oil Company, under agreement with the British and commonwealth governments, and latterly with the Australian government only, undertook the work on the field. At the end of 1926 three holes had been sunk to depths of 890 feet, 1800 feet, and 2707 feet, respectively. The New Guinea Oil Company and the Vogel (New Guinea) Petroleum Company have been working almost continuously. A geological survey and examination has now been made of the Papuan Gulf coast northeast from Yule Island to the Kapuri River district and a re-examination of the areas around the Vailala River.

For some years the search for petroleum in New Guinea was retained in the hands of the government or of organizations working under its direction. Later, however, this restriction was withdrawn and the field was thrown open, under fairly stringent conditions, to private enterprise. Foreign companies are barred. With the assistance that the government is prepared to give all honest endeavors, a number of companies have entered the fascinating search. In Papua there are now three companies engaged in active drilling in widely separated localities. In the central areas trouble has been encountered in the holes. In the extreme eastern and western divisions difficulties have not appeared as yet and, although oil has not been recovered in quantities in these regions, indications have been encouraging.

In parts of New Guinea the obstacles met with in drilling operations have been almost unprecedented. "Running muds" similar to those encountered in Trididad and in Central Europe have proved insuperable hindrances so far, though every resource known to science has been tried. Upwards of $1,000,000 has been spent to date; so that if success is not attained eventually it will not be for want of perseverance. Hovering over all these failures is the tantalizing belief that the existence of oil is practically a certainty. It has only to be reached.

Operations in the Mandated Territory have not progressed so far as in adjoining Papua. Preliminary geological surveys, conducted under commonwealth government control, have suggested possibilities. Private surveys have claimed more definite results, but these claims have not yet been fully sustained. Drilling operations are now in progress in two areas, but while small quantities of oil have been obtained, nothing definite has materialized to date.

Inaccessibility of Sites

At Matapau, 54 miles from Aitape, on the north coast, oil was struck by the Mandated Development Company in a shallow hole, and hopes were entertained that the product would be encountered in larger volume at greater depth. This hope was not realized, however. Under arrangement with the Australian government, geologists of the Anglo-Persian Oil Company are at present carrying out an elaborate investigation of oil possibilities similar to that being conducted by the same organization in Papua. In this work they have been assisted to some extent by a preliminary aerial photographic survey made by members of the Australian air force.

In the Mandated Territory, as elsewhere in New Guinea, difficulties have greatly harassed drillers. Not the least of the troubles has been that of landing the gear on an open coast, where there are no wharfing or other facilities, and then transporting it through swamps and over rough and often mountainous ground to the scene of operations. In some places the heavy drilling machinery has had to be moved by means of block and tackle or drawn up steep inclines by small stationary engines, the resulting daily progress being calculable in yards. In addition, malaria and the hundred and one tropical disorders and discomforts have had to be faced. Labor has been another worry, as the oil men have had to depend largely on untrained and only semi-civilized natives.

One thing regarding oil research in Australia remains to be mentioned—the agreement which the governments have recently entered into under which they will share equally in the expense of a research extending over two years to test the value of the new geophysical methods of prospecting. While this is not being undertaken primarily for oil, but rather with a view to opening up new mineral resources in the empire, it is probable that application to oil problems will be considered in all its bearings before the work is completed. None of Australia's possible or potential oil fields possesses characteristics amenable to geophysical methods as applied at present. In the territories the difficulties of transport, and the tropical climate and vegetation, are all against such a means of prospecting, while in Queensland the structures are so gently, so poorly defined, and so deep that success is doubtful. But experiments which may be conducted during the next two years might very well disclose means by which this new method of prospecting can be applied to the search for oil in Australia and New Guinea.

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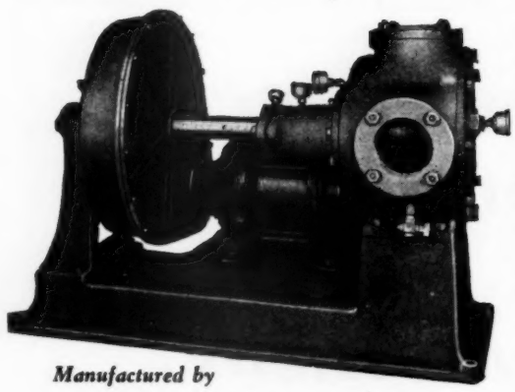

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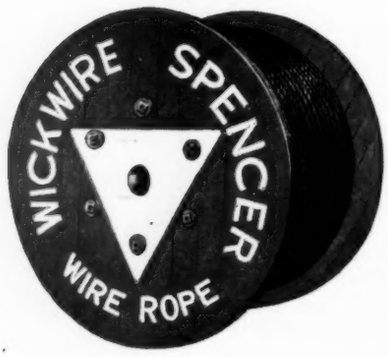

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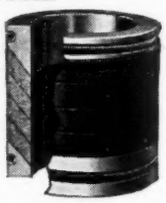

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Increased Drilling Activity During May

New production shows marked increase while daily average shows slight decline

By H. J. STRUTH
Staff Economist

DRILLING activity showed a marked increase during May, which was undoubtedly the result of anticipation and realization of a higher crude market. This accounted for an increase of 38,085 barrels in new production over the preceding month, as well as a gain of 683,000 cubic feet of gas. The number of completions in the United States during the month of May aggregated 2084, of which 1119 were brought in as producing oil wells, 295 as gas wells, and 670 dry holes. These new producers contributed 437,731 barrels of new oil production and 2,200,500 cubic feet of gas. While the total oil production for the month was higher than in April, the daily average was slightly lower. During May the total production aggregated 81,830,200 barrels, a daily average of 2,639,600 barrels, while in April the total production was 79,402,100, a daily average of 2,646,700 barrels. Considering the fact that there was a sizeable increase in new oil production during the month, as a result of increased drilling activity, it is surprising that the total production of the United States was not considerably larger. However, it is apparent that the early part of May witnessed a decline in the daily average production, while the latter part of the month, following the posting of advances in the crude market, was accompanied by increased production in California, Texas, Kansas and Oklahoma. This leads to the conclusion that June will show a considerable increase in production, both in total and daily average.

UNITED STATES PRODUCTION

The following is the gross crude oil production in the United States during May, as compiled from daily averages reported by the American Petroleum Institute. There are some differences between the figures shown below and those beginning on page 75, showing the production by individual fields; the figures below are given in round numbers, while the details by fields are the result of calculating actual American Petroleum Institute weekly estimates for the respective fields.

	Average Daily May	Total Production May	Average Daily April
Oklahoma	679,650	21,069,800	665,600
Kansas	115,400	3,577,850	106,400
Texas (Outside of Gulf Coast) . . .	651,100	20,184,200	650,100
Gulf Coast	150,350	4,661,500	154,550
North Louisiana .	35,350	1,095,400	35,550
Arkansas	71,500	2,216,550	72,900
Eastern States . .	114,150	3,538,950	110,850
Rocky Mountain .	72,850	2,258,950	69,400
California	749,250	23,227,000	781,350
Totals	2,639,600	81,830,200	2,646,700

Production Gains

Gains in daily average production were recorded for Oklahoma, Kansas, Texas, Eastern States, and Rocky Mountain states, while declines were registered in the Gulf Coast, North Louisiana, Arkansas and California. Analysis of field reports for the various major producing areas shows that California operators are increasing their drilling operations and contributing a marked increase in the excess production of the country. During May, new production in California doubled the new production of April, while reports for the early part of June indicate that the rate of increase is even more pronounced. Since stocks of crude in California are piling up at a rapid rate, it is evident that this state is chiefly responsible for the recent sharp upturn in the production curve. Unless California operators give immediate and serious consideration to this problem, the entire industry will soon experience the effect of this burden upon the general crude market. If proration is really in effect in California, the results of the past few weeks certainly fail to indicate it.

Proration Changes

The increases in production in Oklahoma, Kansas and Texas can be attributed to the fact that demand has made it necessary to revise or entirely reproration restrictions. In the case of Oklahoma, it is now well known that current output is somewhat below actual demand, and the state has failed to realize the previously prescribed limit of 725,000 barrels a day. Thus, while drilling operations show a gain over April, in Oklahoma, it is apparent that the quantity of new production obtained has had no adverse influence upon the crude market. As a matter of fact, failure of the Asher pool to produce results anticipated and the fact that the quantity of new production for the entire state during May was somewhat lower than in April, indicates that Oklahoma is well on the road to stabilization and cannot be considered to be overproducing. A similar situation exists in Texas, particularly in the West Texas area. During May there was an increase in the number of wells drilled, but new production was somewhat lower than in April. Failures were more in evidence during May than in April. Gains in production during May were the result of increasing pool outlet to conform with increased market requirements.

Louisiana-Arkansas

While the daily average production in Arkansas was somewhat less in May, there was a considerable increase in drilling activity in that state. Compared with April, the number of wells completed showed a gain of 32, while the quantity of new production was nearly three times as large. During May, Arkansas completed 46 wells, of which 12 were oil producers, with a total 24-hour production of 2254 barrels. During April the quantity of new production was only 803 barrels. North Louisiana also showed a gain in completions during May and doubled its output of new oil. This district contributed nine oil producers with an initial output of 689 barrels, compared with eight producers in April with an initial of 350 barrels.

Eastern States showed considerably more drilling activity, completing 783 wells, of which 445 were oil producers, with a total initial of 29,318. Michigan contributed the largest oil wells of the

UNITED STATES FIELD STATISTICS

Following are the completions, showing oil wells, gas wells, failures and initial production of crude oil by States for the month of May, as compiled by THE OIL WEEKLY:

States—	Completions	Producers	Gas Wells	Failures	Initial Prod.
Arkansas	46	12	3	31	2,254
California	97	88	.	9	168,470
Illinois	12	6	.	6	365
Indiana	17	4	4	9	257
Kansas	74	33	1	40	11,850
Kentucky	121	80	5	36	3,859
Louisiana	81	23	22	36	4,614
Michigan	58	45	2	11	21,086
New York	31	29	.	2	101
Ohio	199	71	75	53	1,790
Oklahoma	297	165	37	95	37,367
Pennsylvania	237	178	25	34	811
Texas	706	353	61	292	183,858
West Virginia	108	32	60	16	1,049
Total	2,084	1,119	295	670	437,731

PAST TWELVE MONTHS

The record for the past twelve months is an interesting study for comparative purposes, the following table giving the field statistics for all States in the Union:

Month—	Completions	Producers	Gas Wells	Failures	Initial Prod.
April, 1928	1,486	772	216	498	397,825
May	1,495	770	186	539	413,378
June	1,545	896	136	513	457,662
July	1,534	882	189	463	522,969
August	1,730	974	217	539	969,742
September	1,809	1,050	223	536	976,494
October	1,729	979	237	513	566,766
November	2,082	1,178	306	598	438,228
December	1,742	981	250	511	429,869
January 1929	2,068	1,221	262	582	746,564
February,	1,434	830	150	442	236,071
March	1,677	911	207	549	468,424
April	1,556	843	206	507	399,646
May	2,084	1,119	295	670	437,731

Note—Rocky Mountain data omitted.

month and registered a considerable gain in drilling activity.

Wildcats on Increase

Wildcatting became more pronounced during May, although the results were not as successful as in April. The number of wildcat failures during May aggregated 39, compared with 34 in April. However, the number of wilcat wells drilled during May aggregated 107, compared with 76 in April. New production from wildcat operations aggregated 716 barrels, compared with 2585 barrels in April. Eliminating West Texas, for both April and May, the results show up more favorably for May. During April, outside of West Texas, where 2545 barrels of new production originated from wildcat operations, only 40 barrels of new oil was recorded in connection with wildcat wells, and all of this was credited to Louisiana. During May, success attended wildcat operations in Louisiana, Arkansas and West Texas, although it required the drilling of considerably more wells to accomplish this result. Thus, May proved to be somewhat of a disappointment to wildcatters.

New Wells

Texas led all states in the number of wells completed during May, with a total for the entire state of 706. The difference in the sizes of wells completed in Texas and California are shown by the fact that Texas, with 353 oil well completions, obtained a total new production of 183,858 barrels, while Californa, with 88 oil well completions, contributed 168,470 barrels of new production. This fact also emphasizes the unfavorable situation that exists in California. Increases in drilling were registered by all of the Eastern States, except Illinois, where there was a decline. Ohio and Pennsylvania showed the largest gains of 58 and 48 wells, respectively.

While the demand for crude is unusually large and the outlook for the balance of this year indicates that domestic demand will exceed domestic output, it is nevertheless apparent that the present rate of production is excessive to a large degree, particularly in view of increased imports of South American oil. Since a greater part of this overproduction can be attributed to California, it is a foregone conclusion that immediate action to prevent a continuation of this unwieldy condition is highly necessary. The fact that production during June will be definitely larger than in May, should prompt the industry to give renewed attention and effort to the solution of this problem. If proper measures are placed into effect on or before July 1, it will be possible for the industry to stabilize the crude supply situation before the end of this year. Unless this is done, the present price level cannot be maintained beyond this fall.

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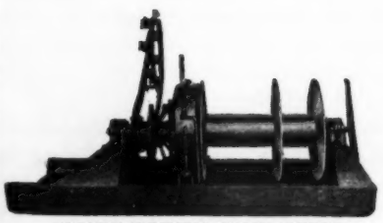
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Summary of Field Operations for May, 1929

RECAPITULATION—UNITED STATES

Section—	Completions	Producers	Gas Wells	Failures	Initial Production Oil	Initial Production Gas*	Monthly Production
Oklahoma	297	165	37	95	37,367	700¾	21,060,260
Kansas	74	33	1	40	11,850	22	3,578,550
Texas, (Outside Gulf)	604	292	58	254	140,815	851¼	20,155,450
Gulf Coast	127	75	3	49	46,968	116½	4,647,400
North Louisiana	56	9	22	25	689	307¾	1,097,400
Arkansas	46	12	3	31	2,254	32	2,216,900
Eastern	783	445	171	167	29,318	170¼	3,538,950
Rocky Mountain	...	...	...	...	...	...	2,249,830
California	97	88	...	9	168,470	...	23,287,000
U. S. Total	2,084	1,119	295	670	437,731	2,200½	81,831,740
April Total	1,556	843	206	507	399,646	1,517¾	78,624,370

*Thousands of cubic feet

TEXAS RECAPITULATION

Field—	Completions	Producers	Gas Wells	Failures	Initial Production Oil	Initial Production Gas*	Total Production
Panhandle	43	25	12	6	32,960	303½	1,934,400
Southwest	78	49	13	16	18,800	379	2,385,500
North	212	125	3	84	10,987	31¾	2,536,000
West Central	177	53	20	104	4,393	81½	1,603,150
East Central	2	...	...	2	...	...	585,350
East	8	...	...	7	1	...	17
West	84	40	3	41	73,675	38½	11,111,050
Total Outside Gulf	604	292	58	254	140,815	851¼	20,155,450
Texas Gulf Coast	102	61	3	38	43,043	116½	4,049,000
Grand Total Texas	706	353	61	292	183,858	967¾	24,204,450

*Thousands of cubic feet.

EASTERN STATES

NEW YORK

	Completions	Producers	Gas Wells	Failures	Initial Oil	Prod. Gas*
Allegany	31	29	..	2	101	..
Total	31	29	..	2	101	..

PENNSYLVANIA

Allegheny	4	2	1	1	10	1½
Beaver	2	..	2	..	...	1¼
Bradford	163	143	1	19	523	4½
Butler	21	10	5	6	68	4½
Center-Middle	3	3	..	..	6	..
Clarion	13	4	4	5	22	5
Greene	11	2	7	2	25	6½
Venango	15	13	2	..	27	2
Washington	5	1	3	1	130	1½
Total	239	178	25	34	811	26¾

CENTRAL OHIO

Ashland	18	4	8	6	229	12½
Ashtabula	1	..	1	..	...	2½
Athens	15	1	12	2	1	9
Belmont	2	..	1	1	...	¼
Coshocton	3	2	1	..	48	¼
Fairfield	1	..	1	..	...	¼
Gallia	2	..	2	..	...	½
Guernsey	7	1	2	4	50	1½
Hocking	6	5	..	1	248	..
Holmes	7	1	5	1	3	3½
Jackson	6	..	6	..	...	6¼
Knox	3	..	2	1	...	3¼
Lawrence	5	..	2	3	...	4¼
Licking	9	7	1	1	49	½
Lorain	3	..	..	3	...	..
Medina	3	2	1	..	29	½
Meigs	10	6	3	1	28	1
Muskingum	9	6	1	2	405	¾
Perry	17	10	3	4	364	1½
Richland	1	..	..	1	...	..
Summit	7	..	5	2	...	3¼
Vinton	3	1	1	1	20	2½
Wayne	5	1	3	1	2	3¾
Total	143	47	61	35	1,476	57¾

*Thousands of cubic feet.

SOUTHEASTERN OHIO

	Completions	Producers	Gas Wells	Failures	Initial Oil	Prod. Gas*
Jefferson	1	1	..	..	2	..
Harrison	3	2	1	..	7	1
Monroe	12	4	4	4	50	1½
Morgan	6	1	3	2	80	1¼
Noble	10	4	2	4	23	½
Washington	14	4	4	6	9	1¾
Total	46	16	14	16	171	6

NORTHWESTERN OHIO

Allen	2	1	..	1	15	..
Hancock	2	2	..	..	50	..
Shelby	1	1	..	..	10	..
Seneca	2	1	..	1	12	..
Wood	3	3	..	..	56	..
Total	10	8	..	2	143	..
Total Ohio	199	71	75	53	1,790	63¾

WEST VIRGINIA

Boone	9	..	9	..	...	10
Braxton	2	..	..	2	...	..
Cabell	2	..	2	..	...	2
Calhoun	21	3	17	1	17	13¾
Clay	3	2	1	..	35	¼
Gilmer	8	7	1	..	309	1¼
Hancock	1	..	1	..	...	½
Harrison	2	..	2	..	...	3½
Jackson	4	2	1	1	20	¼
Kanawha	5	2	3	..	15	3½
Lincoln	9	1	8	..	4	4
Logan	1	..	1	..	...	½
Marion	5	..	4	1	...	6½
Mingo	1	1	..	..	8	2½
Monongalia	1	..	1	..	...	¼
Pleasants	1	1	..	..	2	..
Putnam	1	..	1	..	...	1¼
Ritchie	8	3	1	4	36	½
Roane	11	6	5	..	589	6½
Tyler	6	..	1	5	...	¼
Wetzel	1	1	..	..	2	..
Wirt	1	1	..	..	5	..
Wood	5	2	1	2	7	¼
Total	108	32	60	16	1,049	56½

*Thousands of cubic feet.

KENTUCKY

	Completions	Producers	Gas Wells	Failures	Initial Oil	Prod. Gas*
Allen	6	3	..	3	9	..
Clay	1	..	1	..	...	1½
Daviess	40	27	1	12	1,134	1½
Estill	4	4	..	..	15	..
Hancock	4	..	..	4	...	..
Hopkins	1	..	..	1	...	..
Lee-Owsley	1	..	..	1	...	..
Magoffin	7	5	..	2	45	..
Muhlenburg	1	1	..	..	200	..
Ohio	47	36	2	9	2,433	1
Warren	5	2	1	2	11	1
Wayne	3	1	..	2	2	..
Wolfe	1	1	..	..	10	..
Total	121	80	5	36	3,859	5

INDIANA

Gibson	6	..	1	5	...	4½
Green	1	..	..	1	...	..
Pike	4	1	3	..	30	2½
Spencer	2	1	..	1	2	..
Sullivan	1	..	..	1	...	..
Vigo	2	2	..	..	225	..
Warwick	1	..	..	1	...	..
Total	17	4	4	9	257	7

ILLINOIS

Clark	1	..	..	1	...	..
Crawford	1	1	..	..	30	..
Monroe	1	..	..	1	...	..
St. Clair	6	2	..	4	170	..
Wabash	3	3	..	..	165	..
Total	12	6	..	6	365	..

MICHIGAN

Isabelle	5	5	..	..	1,543	..
Midland	2	..	..	2	...	..
Muskegon	49	40	2	7	19,543	11¼
Oceana	1	...	..	1	...	..
Ottawa	1	..	..	1	...	..
Total	58	45	2	11	21,086	11¼
Total Eastern States	783	445	171	167	29,318	170¼

Total Production Eastern States 3,538,950

CALIFORNIA

Belridge	2	2	..	..	100	..
Brea-Olinda	1	1	..	..	450	..
Elwood	1	1	..	..	4,000	..
Fruitvale	2	2	..	..	1,250	..
Huntington Beach	2	2	..	..	360	..
Inglewood	1	1	..	..	250	..
Kern Front	1	1	..	..	900	..
Long Beach	23	23	..	..	23,105	..
Poso Creek	1	1	..	..	200	..
Richfield	2	2	..	..	475	..
Rincon	2	2	..	..	800	..
Round Mountain	2	2	..	..	650	..
Santa Fe Springs	33	33	..	..	106,530	..
Seal Beach	7	7	..	..	10,000	..
Ventura	8	8	..	..	19,400	..
Wildcats	9	..	..	9	...	..
Total	97	88	..	9	168,470	..

*Thousands of cubic feet.

CALIFORNIA PRODUCTION SUMMARY

Santa Fe Springs	5,465,000
Long Beach	5,486,000
Huntington Beach	1,301,100
Torrance	406,000
Dominguez	304,700
Rosecrans	190,000
Inglewood	724,500
Midway-Sunset	2,085,000
Ventura	1,752,000
Seal Beach	1,245,000
Elwood-Goleta	890,400
Kettleman Hills	109,500
Others	3,327,800
Total	23,287,000

MOUNTAIN STATES PRODUCTION SUMMARY

WYOMING

Salt Creek	995,450
Grass Creek	70,550
Elk Basin	25,400
Big Muddy	72,900
Lost Soldier	102,400
Rock Creek	75,700
Lance Creek	8,650
Oregon Basin	94,080
La Barge	55,500
Others	111,500
Total	1,612,080

MONTANA

Cat Creek	44,500
Sunburst	206,050
Pondera	93,600
Others	3,100
Total	347,250

COLORADO

Moffats	46,900
Fort Collins	75,050
Florence	30,300
Others	63,950
Total	216,200

NEW MEXICO

Table Mesa	6,300
Artesia	27,900
Hogback	9,500
Rattlesnake	18,200
Others	12,400
Total	74,300

Grand Total Rocky Mountain Production 2,249,830

ARKANSAS

	Completions	Producers	Gas Wells	Failures	Initial Oil	Prod. Gas*
Ashley	1	..	..	1	...	..
Bradley	1	..	..	1	...	..
Chicot	2	..	..	2	...	..
Drew	1	..	..	1	...	..
Johnson	1	..	1	..	...	9½
Ouachita	7	2	..	5	76	..
Union	14	8	1	5	2,102	13
Wildcats	19	2	1	16	76	9½
Total	46	12	3	31	2,254	32

*Thousands of cubic feet.

ARKANSAS PRODUCTION SUMMARY

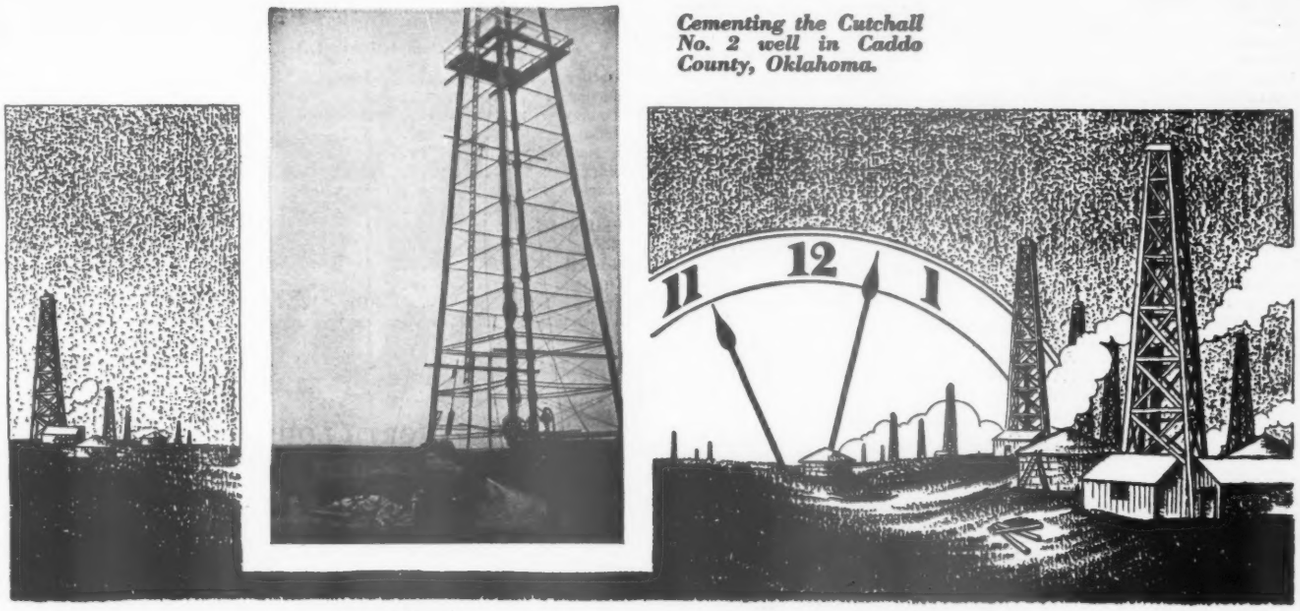
El Dorado	145,700
Champagnolle	258,050
Smackover Light	190,250
Smackover Heavy	1,512,950
Stephens	31,900
Nevada	33,450
Lisbon	41,500
Others	3,100
Total	2,216,900

OKLAHOMA

County	Completions	Oil	Gas	Failures	Initial Production Oil	Gas
Beckham	1	..	..	1	...	..
Carter	5	4	..	1	90	..
Coal	1	..	..	1	...	..
Cotton	8	5	..	3	255	..
Creek	17	5	..	12	775	..
Garvin	1	..	..	1	...	..
Grady	1	..	1	..	...	3
Grant	1	..	..	1	...	..
Haskell	1	..	1	..	...	1½
Hughes	10	5	3	2	2,070	92
Jefferson	2	2	..	..	190	..
Kay	5	1	2	2	15	¼
Kiowa	6	1	..	5	8	..
Latimer	1	..	1	..	...	8
Logan	2	2	..	..	2,290	..
McClain	2	..	..	2	...	..
Muskogee	8	2	2	4	50	1½
Noble	1	..	1	..	...	6
Oklahoma	5	..	5	..	...	284
Okmulgee	13	7	1	5	174	¾
Osage	28	12	4	12	415	34
Pawnee	6	4	1	1	680	1¼
Payne	3	1	1	1	40	7½
Pontotoc	8	5	..	3	393	..
Pottawatomie	55	46	1	8	13,633	12
Seminole	70	47	6	17	13,709	186
Sequoyah	1	..	..	1	...	..
Stephens	12	7	..	5	625	..
Tulsa	1	1	..	..	15	..
Wagoner	5	..	4	1	...	..
Total	297	165	37	95	37,367	700¾

OKLAHOMA PRODUCTION SUMMARY

Braman	109,800
Blackwell	119,900
Hubbard	59,750
Thomas	27,500
Tonkawa	318,900
Garber	173,800
Burbank	637,450
Osage	778,850



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drilled in 48 hours later▲▲▲▲

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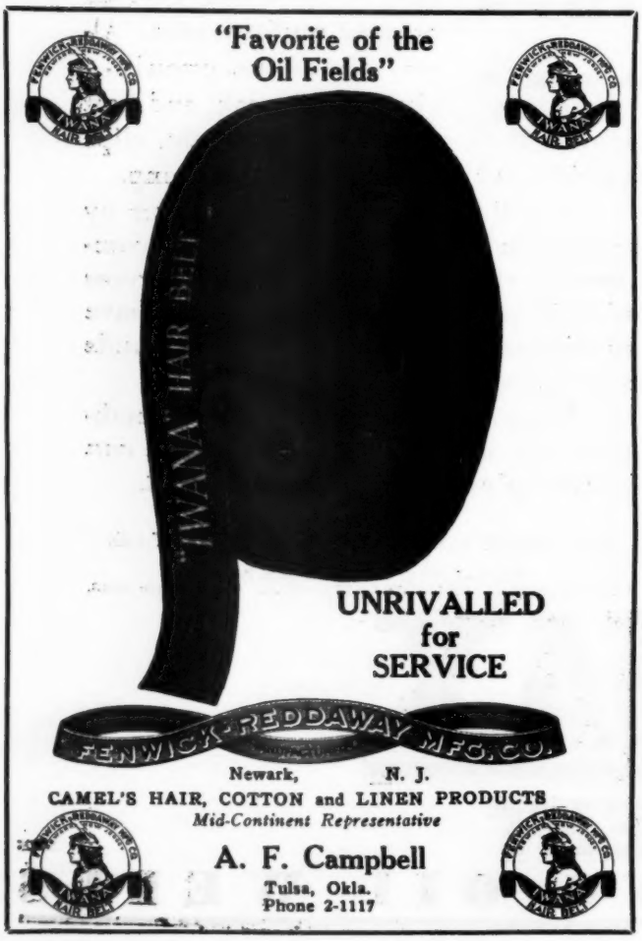
Cromwell	250,900
Papoose	103,410
Wewoka	151,900
Seminole	1,079,500
Bowlegs	1,107,150
Searight	380,150
Little River	2,386,500
Earlsboro	1,890,550
Duncan	204,400
Graham	134,600
Fox	44,650
Healdton	401,000
Hewitt	255,750
Sholem-Alechem	402,900
Pearson	61,000
Oklahoma City	89,850
Mission	1,234,750
St. Louis	2,878,400
Allen	759,700
Maud	871,000
Logan County	380,100
Others	1,617,950
Total	21,060,260

KANSAS PRODUCTION SUMMARY

Greenwood	634,300
Florence	30,700
Peabody	84,600
El Dorado	396,000
Augusta-Fox-Bush	92,100
Rainbow Bend	31,650
Russell	101,600
Churchill	209,200
Oxford	151,300
Sedgewick	942,800
Others	904,300
Total	3,578,550



KANSAS

County	Completions	Oil	Gas	Failures	Initial Production Oil	Initial Production Gas
Barber	1	..	1	..	...	22
Butler	8	3	..	5	325	..
Cowley	8	3	..	5	170	..
Ellis	3	2	..	1	295	..
Greenwood	4	3	..	1	275	..
Harvey	2	..	..	2	...	..
Marion	5	5	..	..	1,165	..
McPherson	2	..	..	2	...	..
Phillips	1	..	..	1	...	..
Rooks	1	..	..	1	...	..
Russell	3	..	..	3	...	..
Saline	1	..	..	1	....	..
Sedgwick	30	17	..	13	9,640	..
Sherman	1	..	..	1	...	..
Stevens	1	..	..	1	...	..
Sumner	3	..	..	3	...	..
Total	74	33	1	40	11,850	22

NORTH LOUISIANA

	Completions	Prod.	Gas	Failures	Initial Oil	Initial Gas	Total Prod
Belleview	..	..	..	..	...	..	19,350
Bossier	4	..	1	3	...	2½	...
Caddo	10	4	1	5	275	50	354,700
Cotton Valley	..	..	..	..	...	..	85,600
Desoto	3	..	..	3	...	..	119,150
Elm Grove	..	..	..	..	...	..	20,600
Grant	1	..	..	1	...	..	...
Haynesville	..	..	..	..	...	..	164,850
Homer	..	..	..	..	...	..	127,400
La Salle	3	2	..	1	250	..	...
Morehouse	6	..	4	2	...	33½	...
Ouachita	11	1	10	..	19	51	...
Pleasant Hill	..	..	..	..	...	..	15,300
Red River	1	1	..	..	15	..	...
Richland	4	..	3	1	...	147	...
Sabine	1	..	..	1	...	..	...
Union	3	..	3	..	...	23¾	...
Urania	..	..	..	..	...	..	183,050
Wildcats	9	1	..	8	130	..	...
Others	..	..	..	..	...	..	7,400
Total	56	9	22	25	689	307¾	1,097,400

LOUISIANA GULF COAST

Anse La Butte	1	..	..	1	...	..	...
Bayou Bouillon	1	..	..	1	...	..	6,400
Black Bayou	1	1	..	..	30	..	...
E. Hackbeerry	1	1	..	..	75	..	77,000
Edgerly	..	..	..	..	...	..	28,000
Evangeline	2	..	..	..	105	..	28,600
Hackberry	12	7	..	5	2,250	..	97,500
Lockport	1	1	..	..	90	..	119,400
Loreauville	1	..	..	1	...	..	...
Sorrento	..	..	..	..	...	..	10,100
Sulphur	1	1	..	..	1,000	..	76,000
Sweet Lake	..	..	..	..	...	..	14,400
Vinton	2	1	..	1	75	..	124,200
Wildcats	2	..	..	2	...	..	...
Others	..	..	..	..	...	..	16,800
Total	25	14	..	11	3,925	..	598,400

TEXAS

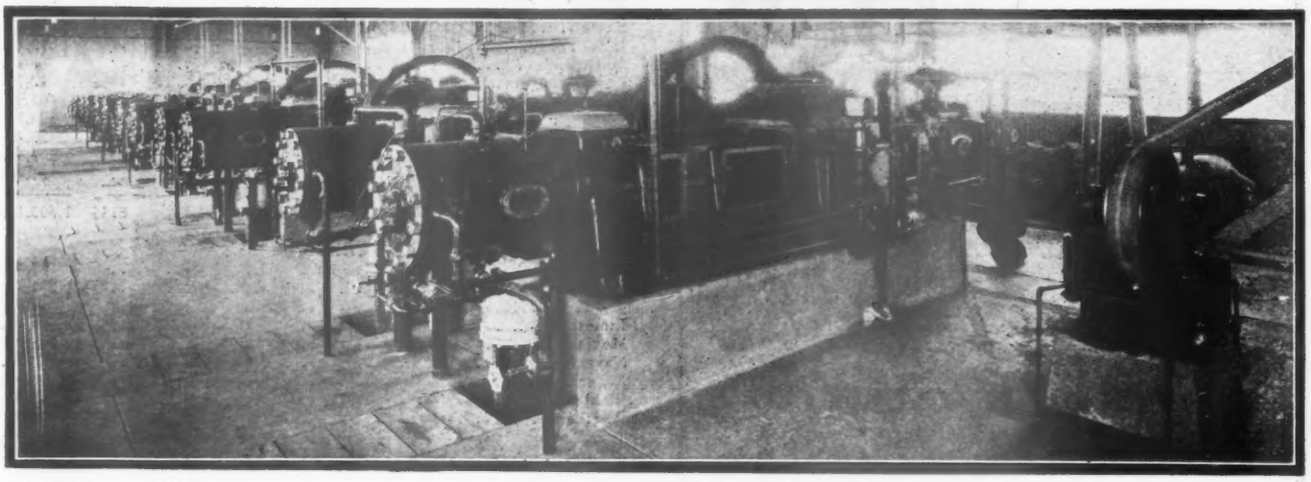
TEXAS PANHANDLE

Carson	2	2	..	..	430	..	207,200
Childress	1	..	..	1	...	..	...
Gray	18	14	1	3	30,735	146½	905,100
Hartley	1	..	1	..	...	2	...
Hutchinson	10	7	3	..	1,170	12½	734,150
Moore	4	2	1	1	625	9	...
Wheeler	7	..	6	1	...	133½	22,350
Others	..	..	..	..	...	..	65,600
Total	43	25	12	6	32,960	303½	1,934,400

SOUTHWEST TEXAS

Cole	3	..	2	1	...	75	...
Dale	..	..	..	..	...	..	16,550
Duvall	11	6	5	..	735	124	...
Jim Hogg	2	1	..	1	50	..	...
Laredo District	..	..	..	..	...	..	361,200
Luling	..	..	..	..	...	..	368,950
Lytton Springs	..	..	..	..	...	..	30,050
Salt Flat	41	39	..	2	17,800	..	1,429,250
Somerset	..	..	..	..	...	..	52,400
Webb	5	2	3	..	165	90	...
Zapata	2	1	1	..	50	35	...
Wildcats	14	..	2	12	...	55	...
Others	..	..	..	..	...	..	127,100
Total	78	49	13	16	18,800	379	2,385,500

1949
1939
1929



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ON AND ON through the years you will find your Bessemers rendering that stellar service which has marked Bessemer performance for three decades.

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Tanks of standard designs and capacities are carried in stock at both Pittsburgh-Des Moines shops —in Pittsburgh and in Des Moines. These are completely fabricated and ready for immediate shipment. Write for prices to the office nearest you.

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NORTH TEXAS

	Completions	Prod.	Gas	Failures	Initial Oil	Initial Gas	Total Prod
Archer	81	38	..	43	1,748	..	516,300
Burkburnett	1	1	..	..	20	..	275,650
Clay	8	5	..	3	160	..	...
Cooke	21	10	..	11	843	..	409,650
Electra	16	10	..	6	340	..	383,050
Grayson	2	..	2	..	...	16¼	...
Jack	7	4	1	2	990	15½	...
KMA-Iowa Park	20	16	..	4	1,595	..	169,450
Montague	5	2	..	3	48	..	...
Wilbarger	51	39	..	12	5,243	..	762,750
Others	..	..	..	..	...	..	19,150
Total	212	125	3	84	10,987	31¾	2,536,000

WEST CENTRAL TEXAS

Brown	28	8	2	18	470	2	247,450
Callahan	13	5	2	6	289	2¾	118,750
Coleman	24	5	3	16	715	26½	112,700
Comanche	3	1	..	2	10	..	...
Eastland	9	4	2	3	675	9¾	195,050
Erath	5	..	4	1	...	6½	...
Jack	..	..	..	..	...	..	65,850
McCulloch	3	..	..	3	...	..	...
Palo Pinto	6	..	5	1	...	18¼	12,100
Shackelford	29	7	..	22	515	..	405,000
Stephens	9	4	2	3	555	13¾	194,700
Throckmorton	..	..	..	..	...	..	20,300
Young	48	19	..	29	1,164	2	209,550
Others	..	..	..	..	...	..	21,700
Total	177	53	20	104	4,393	81½	1,603,150

EAST CENTRAL TEXAS

Boggy Creek	..	..	..	..	...	..	78,450
Corsicana-Powell	..	..	..	..	...	..	251,450
Currie	..	..	..	..	...	..	13,850
Limestone	1	..	..	1	...	..	...
Mexia	..	..	..	..	...	..	175,950
Navarro	1	..	..	1	...	..	...
Nigger Creek	..	..	..	..	...	..	18,600
Richland	..	..	..	..	...	..	12,400
Wortham	..	..	..	..	...	..	34,650
Total	2	..	..	2	...	..	585,350

EAST TEXAS

Harrison	4	..	4	..	...	6	...
Panola	4	..	3	1	...	11	...
Total	8	..	7	1	...	17	...

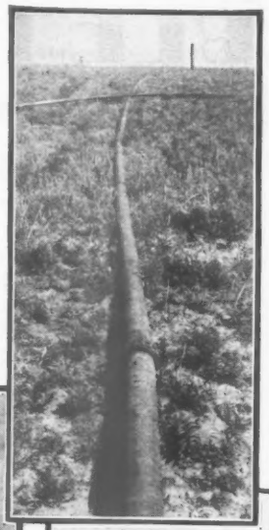
WEST TEXAS

Crane	1	1	..	..	460	..	1,475,350
Crockett	..	..	..	..	...	..	66,050
Howard	14	14	..	..	2,955	..	1,358,300
Jones	1	1	..	..	155	..	144,000
Loving	2	2	..	..	450	..	...
Mitchell-Scurry	..	..	..	..	...	..	83,250
Pecos	12	7	..	5	26,750	..	3,016,100
Reagan	..	..	..	..	...	..	571,500
Winkler	14	12	..	2	42,395	..	4,435,750
Wildcats	40	3	3	34	510	38½	...
Others	..	..	..	..	...	..	60,750
Total	84	40	3	41	73,675	38½	11,111,050

TEXAS GULF COAST

Barbers Hill	6	3	..	3	4,000	..	228,950
Batson	4	2	..	2	80	..	43,800
Big Creek	3	3	..	..	755	..	71,650
Blue Ridge	10	7	..	3	5,200	..	98,150
Boling	4	..	..	4	...	..	55,500
Clay Creek	1	..	..	1	...	..	...
Damon Mound	..	..	..	..	...	..	21,950
Goose Creek	..	..	..	..	...	..	186,150
High Island	2	2	..	..	350	..	...
Hull	5	4	..	1	2,050	..	276,100
Humble	2	2	..	..	12,043	..	268,250
Long Point	1	..	..	1	...	..	...
Moss Bluff	1	..	..	1	...	..	...
Nash Dome	1	1	..	..	200	..	...
Orange	1	1	..	..	40	..	92,600
Pierce Junction	5	4	..	1	2,720	..	593,800
Port Neches	1	1	..	..	1,900	..	...
Raccoon Bend	4	3	1	..	1,680	1½	138,900
Refugio	7	5	2	..	1,430	115	...
Saratoga	3	3	..	..	110	..	27,350
Sour Lake	1	1	..	..	6	..	84,050
South Liberty	17	13	..	4	4,324	..	199,050
Spindle Top	5	2	..	3	1,455	..	872,700
Sugar Land	4	4	..	..	4,700	..	361,050
Washington County	..	..	..	..	...	..	91,000
West Columbia	..	..	..	..	...	..	198,500
Wildcats	14	..	..	14	...	..	...
Others	..	..	..	..	...	..	139,500
Total	102	61	3	38	43,043	116½	4,049,000

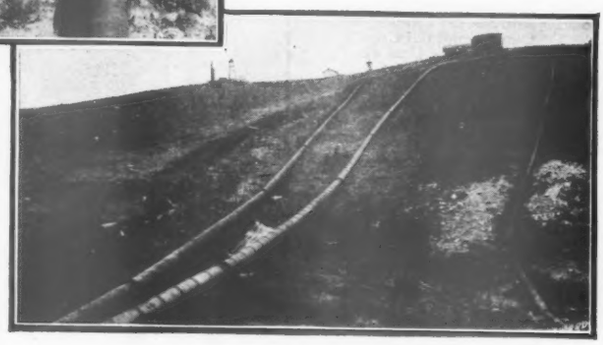
"FOR EVERY JOINT ON THE LINE"



8" crude oil line, Pampa, Texas. 12 men working 8 hours a day laid 3 miles and 800 feet with 8 road crossings where they buried the line.

Victaulic Couplings

6" Victaulic-coupled cast iron pipe for Outdoor Plunge of the New Biltmore Hotel, Santa Barbara, Calif.



6"- 8" - 12" Casing Head gas gathering lines, Berger Field, Texas—all Victaulic-coupled.

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Laid faster—and by unskilled labor—over uneven ground—in a trench or under water—Victaulic-coupled lines are automatically leak-proof—and stay leak-proof even when the line sags or is shifted under full working pressure.

Every joint has high tensile strength and considerable flexibility. The Victaulic Coupling is an expansion joint for the pipe lengths it connects. The line is strain-free for a wide range of temperature variations.

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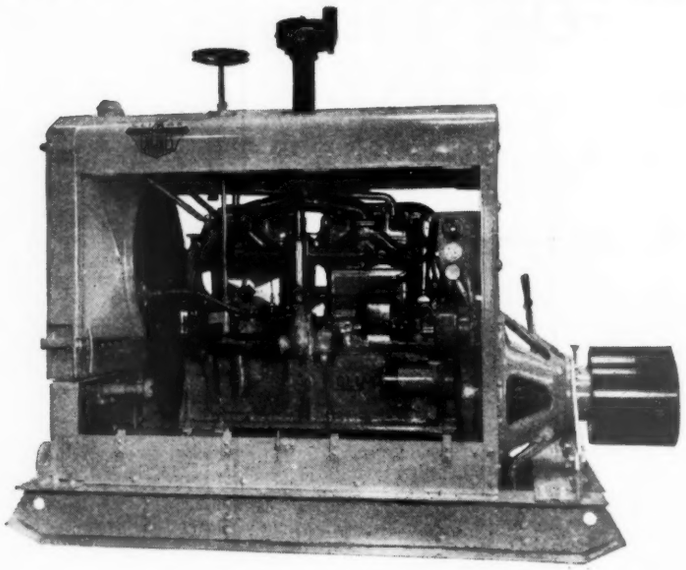

Partial List of Climax Users. Each has from one to twenty Climax Engines

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Mid-Kansas Oil & Gas Co.
The Texas Company
Marland Oil Company
Roxana Petroleum Corp.
Gulf Refining Company
White Eagle Oil & Refining Co.
Standard Oil Co. of California
Landreth Oil Corp.
Roeser & Pendelton
Autrey Oil Co.
Herbert Oil Co.
California Petroleum Co.
Eastland Oil Co.
Grayburg Oil Company
Milham Oil Corp.
Continental Oil Co.
Texas-Pacific Coal & Oil Co.
Yount-Lee Oil Co.
Ryan Consolidated Corp.
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Union Oil Co.
Connell Oil Co.
Skelly Oil Co.
McCulloch Oil Co.
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Twin State Oil Co.
Taylor Link Oil Co.
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One of numerous Paymaster Jr. Portable Drilling Engines being used by Magnolia Petroleum Corp. in Texas.

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ON a portable rig job, up to 3500 feet, you can bet your last dollar on the ability of this famous Climax Paymaster Junior drilling engine to make holes fast—and economically. Its past performance is doubly assured by a new and larger clutch of improved design and by an extra large output shaft. It is equipped with generator, battery, electric starter, improved gas mixing valve, instrument board, turnbuckles and kit of tools. The steel skids make it easy to handle and you can haul it on an ordinary one-ton truck. It is the ideal engine for any of the shallower drilling—ask any user about it.

CLIMAX ENGINEERING COMPANY
75 WEST 18TH AVENUE CLINTON, IOWA

DISTRIBUTED BY

THE NATIONAL SUPPLY COMPANIES

NSCO

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

EASTERN STATES

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD COUNTY—		
South Penn Oil Co., Bingham 533, tr 107	2	....
Bingham 533, tr 108	2	....
Bingham 154, tr 44	2	....
Bingham 151, tr 45	3	....
Bingham 196, tr 1	7	....
Bingham 190, tr 82	2	....
Bingham 395, tr 1	3	....
Bingham 423, tr 21	3	....
Bingham 499, tr 1	2	....
Burdick 65	2	....
Burdick 67	2	....
Burdick 68	2	....
Hooker 1	3	....
Kinzue 190	2	....
Riddle Est 10	pressure	....
Riddle Est. 11	2	....
Riddle Est. 12	2	....
Riddle Est. 13	2	....
Whipple 26	3	....
Lot 14, tr A-2	2	....
Lot 14, tr 06	pressure	....
Melvin 285	2	....
Associated Producers Co., Bingham 212, tr 15	3	....
Bingham 212, tr 16	8	....
Bingham 214, tr 20	8	....
Bingham 214, tr 21	17	....
Forest Oil Corp., Forest, 22 oil wells	44	....
Forest, 18 pressure wells	0	....
Hazelwood Oil Co., Fee 23	3	....
Fee 24	2	....
Fee 25	2	....
Fee 26	2	....
Block 23, tr 011, 014, 015	pressure	....
Block 23, tr 130	2	....
Block 23, tr 134	2	....
Block 23, tr 135	2	....
Block 23, tr 137	2	....
Block 23, tr 139	2	....
Simpson & Co., Bingham 368, tr 62	2	....
Bingham 368, tr 63	2	....
Bingham 368, tr 64, 65	pressure	....
Al & M. L. Lilly, Middaugh 35	7	....
Middaugh 36	5	....
Schopperle Bros., Duke 4	pressure	....
Scraxton & Son, Scraxton 1	12	....
James W. Looker, Kennedy 4	12	....
Phoenix Oil Co., Clark & Kennedy 1	12	....
H. Efl Camp Est., Bingham 5	27	....
A. H. Wiborg, Meldrum 6	5	....
BUTLER COUNTY—		
Ravenwood Oil Co., McGinley 2	4	....
M. B. Finnessy, Snyder 15	2	....
Kesselman & Co., Mountz 1	¶1	....
M. Dunlap, Stockline 1	*	....
Freeman & Boals, Montgomery 2	*	....
ALLEGHENY COUNTY—		
Senn & Co., Deiker 1	*	....
Unity Oil Co., Cohen 1	*	....
CLARION COUNTY—		
H. W. Wilson, Vowinckle 2	¶1	....
Vowinckle 3	¶¾	....
Slecker Bros., Slecker & Son 12	3	....
Alum Rock Gas Co., Hess 12	4	....
Mong & Jenger, Kline 1	3	....
S. E. Jordon Interests, Brown 5	2	....
CENTER-MIDDLE FIELD—		
Reid & Hickey, Lot 2, tr 14	25	....
Clinger Bros. & Co., Johnson 4	7	....
Blair & Co., Lot 398, tr 5	4	....
Sylvania Oil Corp, Kaul 34	2	....
Hazard & Myers Bros., Cleland 9	3	....
Sloan & Zook, Lot 420, tr 52	2	....
VENANGO COUNTY—		
Brundred Oil Corp., Lot 82, tr 73	2	....
Lot 82, tr 74	2	....
Lot 82, tr 75	2	....
Lot 82, tr 76	2	....
Thos. McLaughlin, McLaughlin 16	¶½	....
S. P. McCalmont Estate, Horner 1	¶½	....
Ladd & Cobb, Dana 6	3	....
G. H. Klinger, Klinger 1	3	....
Morris & Goldstein, Goldstein 16	3	....
Fryburg Motor Co., Bush 4	¶½	....
S. G. Milton, Milton 78	2	....
Milton 79	2	....

SUMMARIZED REVIEW OF FIELD RESULTS

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Prod. This Week	Initial Prod. Last Week
Arkansas	7	5	2	2	1	..	4	3	175	368
California	25	15	24	14	..	..	1	1	53,400	36,933
Illinois	2	2	2	1	..	..	..	1	260	220
Indiana	1	2	1	..	..	2	..	..	45	...
Kansas	16	21	10	8	2	1	4	12	6,630	2,605
Kentucky	19	40	13	27	1	1	5	12	527	1,167
Louisiana	14	22	4	7	1	7	9	8	1,377	5,450
Michigan	10	9	9	5	..	1	1	3	2,218	2,250
Mississippi	..	1	..	..	..	..	..	1	...	...
New York	10	..	10	..	..	..	..	..	56	...
Ohio	45	47	10	19	26	16	9	12	398	386
Oklahoma	57	62	26	36	8	4	23	22	11,613	15,832
Pennsylvania	96	4	86	..	6	3	4	1	318	...
Texas	152	122	85	62	5	11	62	49	48,059	28,304
West Virginia	12	14	..	2	10	9	2	3	...	10
Total	466	366	282	183	60	55	124	128	125,076	93,525
Increase this week	100	..	99	..	5	..	..	..	...	...
Decrease this week	..	..	..	..	..	..	4	..	31,551	...

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
ALLEGANY COUNTY—		
N. V. V. Franshot, Herrick & Co. 7	10	....
E. J. Phillips & Co., Phillips 1	7	....
Forest Oil Corp., Forest (four wells)	8	....
Forest Oil Corp., Forest 1	pressure	....
Sepanny Oil Co., Stewart Estate 7	4	....
Jacob Meridian, Meridian 2	7	....
A. C. A. Oil Corp., Fee 4	5	....
M. J. Crowley & Co., Crowley 12	5	....
Dermitt & Gilligan, Dermitt 17	5	....
Richmond Oil Co., Ryder & Co. 9	2	....
Dusenbury & Co., Wheaton 4	3	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
RITCHIE COUNTY—		
Pittsburg & West Virginia Gas Co., Hall 4850	¶½	....
Pierce 4474	¶½	....
Adams Oil & Gas Co., Newbrough 4	¶1½	....
R. M. Deem & Co., Heater 1	¶¾	....
F. G. Moyer, Westfall 1	*	....
LINCOLN COUNTY—		
United Fuel Gas Co., Bias 2596	¶½	....
Earl Cameron, Stone 2	¶½	....
CABELL COUNTY—		
Hamilton Oil & Gas Co., Childres 1	¶1	....
Aetna Oil & Gas Co., Hall 1	¶¾	....
CALHOUN COUNTY—		
Gerwig & Koethe Oil & Gas Co., Hardman 11	¶2	....
MINGO COUNTY—		
E. H. Yates, McManard 1	¶3½	....
LOGAN COUNTY—		
W. G. McCorkle, Garrett 1	*	....

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
HANCOCK COUNTY—		
Wentworth Oil Co., Burdette 2	¶½	....
OHIO COUNTY—		
C. E. Daugherty & Co., Trodgen 2	60	....
Trodgen 3	50	....
Trodgen 4	60	....
Hupp, Duff & Co., Trodgen 7	60	....
Wood Oil Co., Inc., Smith 10	40	....
Bean 1	*	....
Fred Evans & Co., Carter 1	*	....
C. E. Daugherty & Co., Hewlett 2	*	....
DAVIESS COUNTY—		
Penn-Indiana Oil Co., First National Bank 4	10	....
Smith, Randolph & Co., Whitesville Bank 5	20	....
Whitesville Bank 6	12	....
Hupp, Duff & Co., Brachter 1	5	....
Jetsan Oil Co. & Co., Hinton 2	30	....
Whitmer Oil & Gas Co., Sparks 3	*	....
Goldburg, Young & Co., Purcell 3	*	....
Wood Oil Co., Sands 3	25	....
Cumberland Petroleum Co., Salmon 2	140	....
Vickers & Co., Mills 2	15	....

INDIANA

Company, Well and Location	Initial Production Bbls.	Depth
SPENCER COUNTY—		
E. M. Treat Co., Cisna 1	45	1290

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
WASHINGTON COUNTY—		
Wilson & Malone, Wilson 1	¶½	1200
Preston Oil Co., Walsh 4	¶½	1047
Pure Grit Oil Co., Blair 1	*	1660
William Taggart & Co., Marshall 1	*	1340
MORGAN COUNTY—		
Bowman & Co., Carr 1	¶¼	1631
Ohio Fuel Gas Co., Kennard 1	¶¼	1424
NOBLE COUNTY—		
Adam Nau & Co., Hoffman 1	2	....

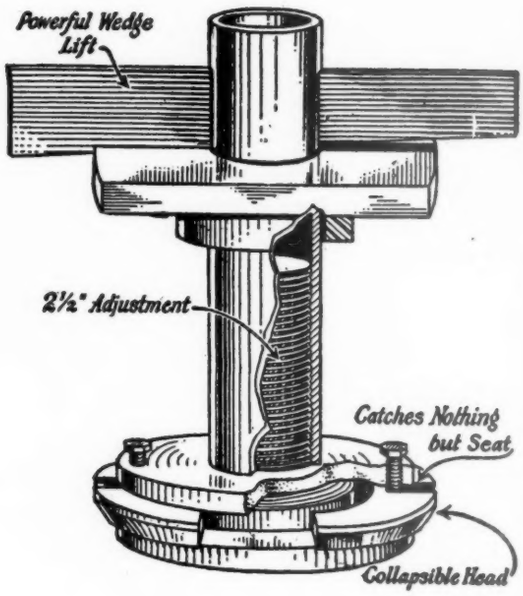
CENTRAL OHIO

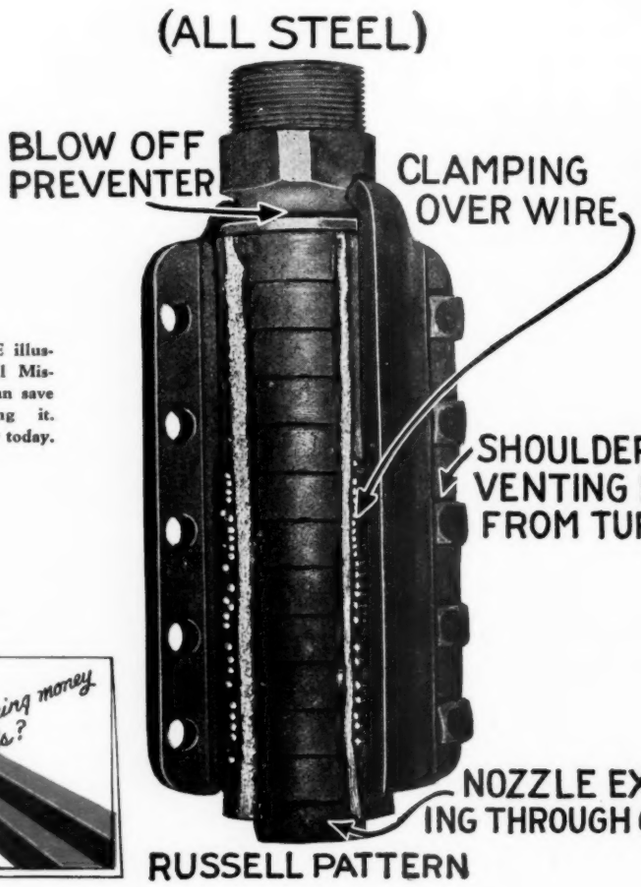
Company, Well and Location	Initial Production Bbls.	Depth
ASHLAND COUNTY—		
Ohio Fuel Gas Co., Chandler 1	*	....
The Kemrow Co., Mosher 1	*	....
Robinson & Co., Smith 120-A, 1	70	....
Two acres, 1	50	....
Young 2	8	....
Mohican Oil & Gas Co., Chesrown 2	48	3172
Harry C. Farmer, Paulling 1	¶½	....
ATHENS COUNTY—		
Ohio Fuel Gas Co., Harris 1	¶¼	961
Sugar Creek Coal 1	¶½	3776
Henry 2	¶¾	1531
Kiggins & Co., Lovell 3	¶¼	1384
COSHOCTON COUNTY—		
Ohio Fuel Gas Co., McKelvey 1	¶1	....
Mullett 2	80	2555
Preston Oil Co., Wilson 2	102	3593
SUMMITT COUNTY—		
F. A. Brendall & Co., Sours 1	¶1¼	....
Snyder 1	¶3¼	....
East Ohio Gas Co., Keifer 1	¶4½	....
PERRY COUNTY—		
Ralph Bros., Moore 3	¶¾	3525
Ohio Fuel Gas Co., Burley 1	¶1¼	3456
J. Elder & Co., Poling 4	¶¼	....
WAYNE COUNTY—		
Logan Gas Co., Bonawit 1	¶½	....
Garber & Berg 1	¶½	....
LORAIN COUNTY—		
Ohio Fuel Gas Co., Rice 2	¶1½	....
Daugherty & Co., Bousck 1	*	....
HOCKING COUNTY—		
Gordon Oil Co., Stone 9	25	2908
BELMONT COUNTY—		
Preston Oil Co., Henderson 8	5	1742
MEDINA COUNTY—		
Ohio Fuel Gas Co., Mong 2	¶1	....
STARKE COUNTY—		
Penn Oil & Gas Co., Nichter 1	¶1	....
RICHLAND COUNTY—		
Logan Gas Co., Stevens 1	¶1	....
MEIGS COUNTY—		
Logan Gas Co., Heitder 1	¶½	1538
JACKSON COUNTY—		
Ohio Fuel Gas Co., Cox 2	¶¼	2646
HOLMES COUNTY—		
Ohio Fuel Gas Co., Kilgore 1	*	....
KNOX COUNTY—		
East Ohio Gas Co., Galehouse 1	*	....
GUERNSEY COUNTY—		
Ohio Fuel Gas Co., Black 2	*	3458

Five Ways to Profit!

1

The Seco Valve Seat Puller at the right is a time and money saver. It is a positive puller that will not break when pulling valve seats, regardless of how tight they are stuck. It is approved by the best engineers in the pump manufacturing business and is accepted by the men in the field as insurance against delays.





2

You profit by using the Seco "Russell" Hose Clamp and Nozzle at the left because it makes your hose last fifty per cent longer.

At least 98 per cent of hose trouble is caused from loose wire at the end of the clamp. The Seco "Russell" Hose Clamp is made to go over the wire, preventing it from loosening. Tested up to 1800 pounds pressure without danger. Easily carries 1000 pounds pressures on ordinary 6-ply hose.

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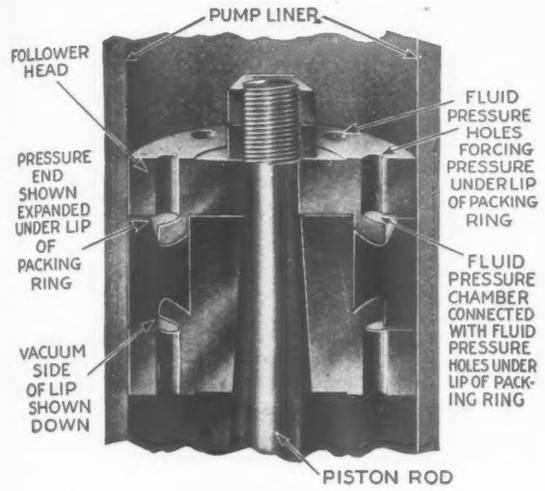
PUMP LINER
FOLLOWER HEAD
PRESSURE END SHOWN EXPANDED UNDER LIP OF PACKING RING
VACUUM SIDE OF LIP SHOWN DOWN
FLUID PRESSURE HOLES FORCING PRESSURE UNDER LIP OF PACKING RING
FLUID PRESSURE CHAMBER CONNECTED WITH FLUID PRESSURE HOLES UNDER LIP OF PACKING RING
PISTON ROD

3

You men in the field know that this Kibele Piston outlasts the average piston four or five times. It is self expanding and frictionless; made for rotary drilling slush pumps, mine pumps, boiler feed and oil or liner's pumps. It is made to fit any pump and no special rods are required. The rubber is compounded to our own specifications. Pistons are of exceptionally close gray iron with outer surfaces chilled.

4

The Seco Straight Shot Valve illustrated at the right is made for all makes and sizes of pumps and is particularly adapted to slush, hot and cold water, gasoline and hot oil up to 300 degrees. All parts are made of high carbon, forged steel except the inserts which are of a special make and used exclusively in Seco Valves. They have shown in numerous instances to give 100% more service than any insert ever used.

5

This Guy Tightener is an insurance against storms. Has the strength of a ¾-inch turnbuckle with no threads to rust. Will take up 16 inches of 9/16th line with one turn with a small bar, and cotter keys keep tightener in place.

MISSION

Sales Company, Inc.,

Esperson Bldg.

HOUSTON

An IRONSIDES belt will pull any load in the oil field

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A belt must be as tough as rhinoceros hide and as flexible as spring steel to stand the punishment of oil field drives without breaking down. A drill or a slush pump is no place for a weakling. Work can't stop and every belt must continually deliver every pound of pull built into it.

We make our belts accordingly. Quaker IRONSIDES Brand is an A.P.I. belt that will serve you well and economically, too.

An IRONSIDES belt has the spring to stand heavy strains without a permanent stretch. It is flexible, will cling to pulleys, pull the load and stand a lot of abuse.

Every operator who uses IRONSIDES knows that there is a world of rugged power built into its sturdy carcass. Its performance always warranted our faith in it, and we are positive a trial will convince you. Our nearest distributor can supply you without delay.

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Main offices and factories
WISSINOMING PHILADELPHIA

Branches:
New York Chicago
Pittsburgh San Francisco

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
ST. CLAIR COUNTY—		
Morris & Yeager, Dettenbach 2	150	562
Arthur Pratt, Attorney, High School lot 1	110	....

MICHIGAN

Company, Well and Location	Initial Production Bbls.	Depth
MUSKEGON COUNTY—		
Dixie Oil Co., McLaughlin D-5	600	2058
Johnson Oil & Refining Co., Thompson 4	600	2045
Thompson 6	300	2058
Wiser Oil Co., Osgood 1	250	2070
Roval Oil Co., Young 1	2000	1700
Fred J. Estes & Co., Page 2	150	1700
Mitchell & Messeroff, Nelson 1	100	2023
Continental Motors Oil Corp., Fee 11	10	2090
Harry Harper, Bragg 1	8	1744
Harvey Bolema Syndicate, Gritzner 1	*	2300

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
VAN WERT COUNTY—		
John Elias, Hiller 4	8	1256
WYANDOT COUNTY—		
Wharton Oil & Gas Co., Pickett 1	¶¼	....
HANCOCK COUNTY—		
Watts & Harmon, Bell 1	¶¼	....
MERCER COUNTY—		
Wm. B. Lawrence Jr. & Co., Purdy 2	*	1170

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
COTTON COUNTY—		
Shasta, Chalmer 2, sw nw nw se, 2-2s-10w	75	2193
Cullum and Perkins, Priddy 7, se ne ne, 3-2s-10w	*	2203
Cooper and Badgett, Wilson 1, se nw, 15-2s-11w	*	2490
Derdyn and Pruitt, Musgrove 1, nw se, 21-2s-11w	*	2505
CREEK COUNTY—		
H. U. Bartlett, Bartlett "B" 4, se ne nw ne, 18-19-9e	¶4	1533
C. G. Tibbens, Jackson 5, se ne sw, 4-18-21e	8	2219
Lynch et al, Grayson 3, sw ne nw, 4-18-12e	4	1729
Magnolia, Lewis "B" 10, cwl sw sw, 27-17-7e	7	2832
Markham and Tidal, Prentice-Johnson 7, (owdd) csl ne nw, 2-19-7e	*	2988
William Sheerry and Carter, Mesquite 2, sw se ne, 36-19-9e	*	2917
Miller et al, Irelan 1, se ne, 4-17-11e	*	1875
Chief Drilling Co., Sheridan 1, sw ne, 33-16-11e	*	3066
Atlantic, Bear 1, nw se, 16-14-10e	*	3380
The Prairie, Yahola 2, nw sw, 16-14-8e	*	3864
GARVIN COUNTY—		
Texas Pacific Coal & Oil, Parnell 1, nw ne, 16-1n-3w	35	1595
GRADY COUNTY—		
Meridian Gas, Short 2, se sw sw, 25-4n-8w	¶6	2350
Oklahoma Gas Utilities, Williams 2A, ne sw sw, 11-4n-8w	*	2607
HUGHES COUNTY—		
Shell, et al, Tiger 1, se ne, 5-6-8e	*	4654
MUSKOGEE COUNTY—		
C. C. Wachob, Manuel 1, cel ne sw, 36-15-16e	*	2440
OKFUSKEE COUNTY—		
The Prairie and Producers & Ref., Palmer 1, nw ne, 2-11-9e	*	4035
Tidal, Johnson 1, nw sw, 29-12-9e	*	4231
Kingwood, et al, Lowe 1, cel sw se, 16-10-11e	*	1900
Producers & Ref., Monarye 3, nw se se, 29-12-10e	480	3150
McMahon and Carey, Sproleder 1, ne sw se, 29-12-10e	800	2943
Fern, Holmes 1, cel se se, 24-11-10e	200	1852
Mid Continent, et al, Dendy "B" 1, ne sw ne, 31-11-11e	60	3014
F. Moore et al, Autry 1, sw se nw, 12-10-11e	9	1565
OKMULGEE COUNTY—		
Riney and Williams, Love 4, (owdd) se ne sw, 9-14-14e	*	1902
A. W. Cline, Harrison 1A, se nw, 19-15-14e	¶5	1675
Taylor and Geiger, Tiger 9, nw sw ne sw, 22-15-14e	2	1688
Moffett et al, Holmes 3, cel nw ne, 7-11-12e	3	2090
OSAGE COUNTY—		
Wrightsman Pet. 1, nw se nw nw, 20-26-9e	*	2371
Ray Branstetter et al, 1A, sw, 12-22-11e	*	1940
Peters 3, cnl sw, 32-24-9e	25	1610
Winona 2, (owdd) nw sw sw, 27-24-10e	8	2057
Peters 2, se nw, 28-24-10e	6	1355
Indian Territory Illuminating 405, ne nw ne sw, 35-23-10e	¶½	1621
Clint Moore Estate et al 2, sw nw ne, 16-21-9e	20	2155
PAWNEE COUNTY—		
Chas. Burton, Byers 4, sw se nw, 36-21-8e	*	1345
PONTOTOC COUNTY—		
Belchie and Laskey, Crabtree 1, (owdd) c nw se, 32-5-7e	¶10	1495
POTTAWATOMIE COUNTY—		
Empire-Amerada, Bullock 2, nw ne nw, 8-9-5e	890	4386
Phillips, Reed 1, ne nw nw, 8-9-5e	765	4372
SEMINOLE COUNTY—		
McCullough, McGilbray 1, sw ne, 4-8-8ee	*	4315
The Texas, Lucy 9, se ne nw ne, 19-5-8e	335	2625
Empire, Cluck 10, nw ne se, 11-8-5e	575	4244
Gypsy, Barkus 10, sw nw sw, 6-8-5e	260	4247
Independent, Carpenter 3, nw ne ne, 27-7-6e	965	3129
Mid Continent, Smith 5, nw sw ne, 5-7-7e	4730	4232
Sinclair & Marland, Warrior 2, sw nw nw, 17-9-7e	¶2	2642
Sinclair, Jefferson 1, se ne se, 23-5-7e	850	4183
Producers & Refiners, Thomas 1, ne se nw, 5-7-7e	470	4369
STEPHENS COUNTY—		
Lesh and McCall, Moore 1, sw se ne ne, 13-2s-8w	*	2151
Magnolia, Kagay 22, ne sw, 34-1s-8w	17	1859
TULSA COUNTY—		
Hose and Glidden, Hawkins 2, se nw sw, 18-19-12e	*	2385
Gray, Leader "B" 2, c nw ne, 3-18-11e	*	2394
West Pet. Co., Smith 1A, sw se nw, 11-18-12e	¶1	860
WAGONER COUNTY—		
Horner, Kidd 2, se nw nw, 22-18-17e	¶2	816
Cherokee Public Service, Brown 1, (owdd) nw sw, 36-16-17e	20	886

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
Empire, Sherrock "W" 2, nw ne ne, 27-27-5e	250	2771
COWLEY COUNTY—		
Krow White, Powere 1, c nw nw, 9-32-5e	¶¼	732
Cavit 1, c ne sw, 9-32-5e	¶¼	726
The Prairie, Mitschler 2, se sw se se, 9-32-4e	1000	3293
GREENWOOD COUNTY—		
Phillips, Pixlee 2, se ne nw, 10-22-10e	275	2297
Empire, Patterson 1, nw ne sw, 36-23-11e	375	1836
Henderson & Holden, Pixlee 1, nw sw ne, 10-22-10e	*	2304
Davis & Hazlett, Pixlee 1, ne sw, 10-22-10e	*	2289
HARVEY COUNTY—		
Hartman and Skaer et al, Seaman 1, nw ne se, 26-24-1e	*	3535
SEDGEWICK COUNTY—		
Bu Vi Bar et al, Vallbrecht 1, nw sw ne, 7-26-1e	500	3405
Davis and Skelly, Wilson 7, sw se ne, 1-26-1w	1375	3375
Wilson 6, se ne, 1-26-1w	1305	3379
Flake, Community 1, se, 18-26-1e	*	1965
SUMNER COUNTY—		
Champlin, Latta "B" 4, (owdd) nw se nw, 9-30-3w	25	3090
Love 1, (owdd) nw ne sw, 9-30-2w	25	3200
Gypsy, Williams 1, nw se sw, 16-35-3w	1500	4782

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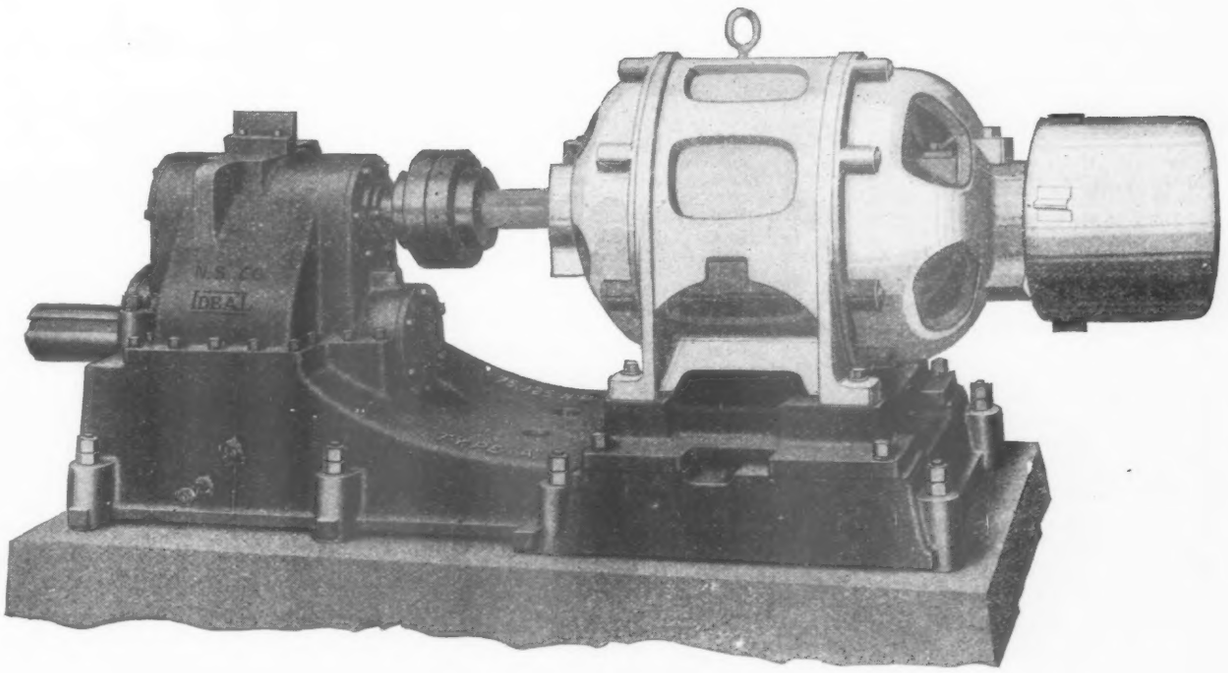

Descriptive Bulletin
No. 16UA
Free On Request

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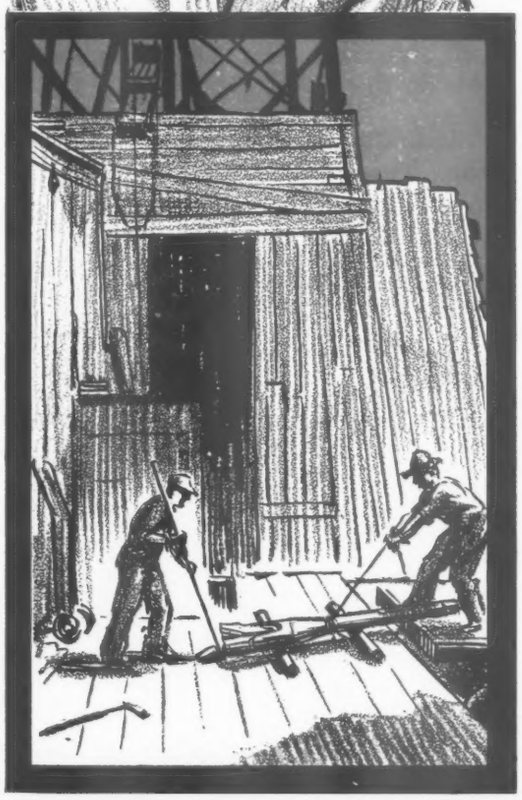
SHACKELFORD COUNTY—
Campbell & McDonald, Reynolds 1.. * 1155
Les Combest Oil Co., Reynolds 1 ... * 1237
Cranfill & Reynolds, Moberly 2-B.. 5 1049
Gilman & McMurray, Matthews 2 .. 8 637
J. T. Hogan et al, Flippen 1 ..... * 1010

WEST TEXAS

CRANE COUNTY—
Gulf Prod. Co., J. T. McElroy 63 ... 205 2887
HOWARD COUNTY—
Humble O. & R. Co., Settles 1 .... 125 2295
Moody Corp (Superior), Roberts 11-E 25 1436
PECOS COUNTY—
Mid-Kansas-Transcontinental, Yates 7-D 15,000 1287
The California Co., Smith 2, Lse. 5 (Sec. 16) 20 1597
REAGAN COUNTY—
Big Lake Oil Co., University 166.... 50 2941
UPTON COUNTY—
Humble, R. P. Ricker 11 ..... 45 2434
L. H. Wentz et al, M. Shirk 5..... 35 2335
WINKLER COUNTY—
Prairie O. & G. Co., Scarborough 1 90 3129
Southern Crude & Westbrook, Hendrick 8-J-T-89 ..... 380 2911
Hendrick 7-K-T-88 . ..... 300 2873
Hendrick 4-O-T-88 ..... 350 2753

XUM

ANOTHER JOB WELL DONE • FASTER • AND CHEAPER THAN I EXPECTED



2

"WHY do I rent from Bridgeport? That's not a hard one for me to answer. Listen — four years ago I took a chance with an old rented tool — and what a junk pile cheater it was. I'll never forget the three-week fishing job it cost us."

"Since I got educated with that expensive lesson I've stayed smart and stuck to Bridgeport — they've never failed me. Every tool they send out is in the best of shape — factory dressed and all groomed up for the very toughest kind of a job."

"Bridgeport tools are always so easy and quick to get, and I'll tell the world — they certainly do my jobs lots faster and cheaper than any other tools I've ever used — just like this one did."

+++++

The Bridgeport Machine Company is the largest concern in the world supplying underreamers and fishing tools on a rental basis. And Bridgeport — makers of the universally famed Swan — is the *only* concern in the world supplying underreamers of its own manufacture on a rental basis. These are important facts, because you are always assured of getting the best of tools in the very best of condition — tools that have been carefully dressed and rigidly inspected before leaving our factory or stores.

Bridgeport Rental Service has many other features of great importance to every driller. Read them over carefully, and you'll understand why this great service is saving so much time and money for the hundreds of producers who have learned to depend on it.

WHAT BRIDGEPORT RENTAL SERVICE MEANS TO EVERY DRILLER!

1. Underreamers and fishing tools shipped anywhere on request — then if not used in a reasonable length of time, returned to us. No rental charged.
2. The famous Swan Underreamers — guaranteed to be in the best of condition, rented direct from their manufacturer — or distributors.
3. We pay transportation charges, when there is a rental charge, up to 10% of the rental fee.
4. Rental fee charged only from the time tools leave the transportation company, to the time they are returned to them.
5. Branches throughout the oil fields, with complete stocks of underreamers and fishing tools for rental service.
6. Twenty-four-hour service is maintained at every branch, for prompt action day or night on any need. Phone calls or wires accepted collect.

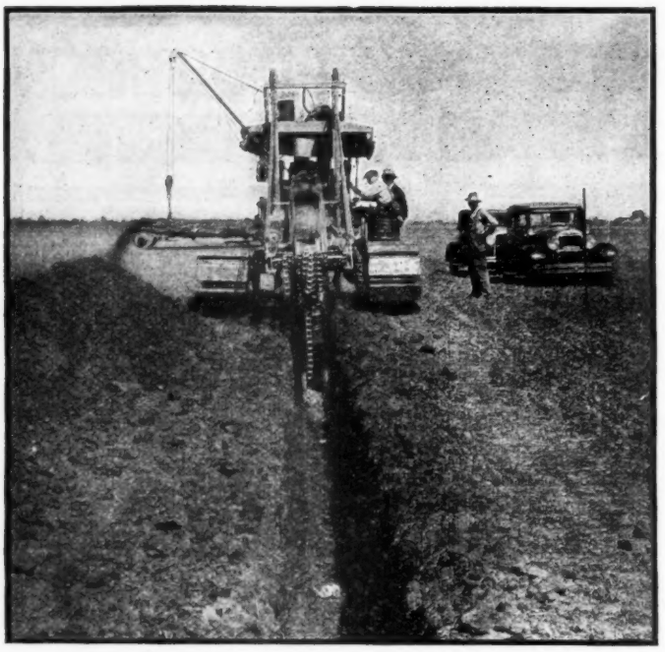
"BRIDGEPORT RENTAL SERVICE - MOST EXTENSIVE - LEAST EXPENSIVE"

THE BRIDGEPORT MACHINE COMPANY

GENERAL OFFICES & FACTORY

WICHITA, KANSAS

Branches Throughout The Oil Fields



SPEED

New production demands real action. Additional lines needed must be installed rapidly for immediate use. Time is at a premium and mechanical equipment absolutely must stand up and deliver. In the case of pipe line ditchers, this means a consistent maximum yardage in all practical digging—at a minimum cost.

For over thirty years Buckeye designers have been studying and meeting, successfully, field conditions and requirements as they come. During this long period of time, we have had the whole-hearted cooperation of the world's leading pipe line engineers and contractors. They have suggested many valuable operating features which have been embodied in Buckeye construction.

Most convincing proof of Buckeye speed and dependability is offered by the production records of both large and small field developments. *"296 miles of pipe line in 104 days"—"6400 feet in 10 hours" — "52 miles in 68 days" — "6 years old, and as good as new."* Statements of this kind from reputable owners and operators are eloquent evidence of Buckeye mechanical supremacy.

Compare these standard time and labor saving working features: Steel tread Alligator (crawler traction) wheels, with brakes for safe operation on grades; rugged structural steel main frame; slow speed, heavy-duty, industrial type motor; rigid digging wheel, driven on both sides to equalize pull; variable cutting widths; multiple digging speeds; and simple, efficient one-man control.

Ask for complete specifications and prices.

The Buckeye Traction Ditcher Co.

FINDLAY, OHIO

There's a Buckeye Sales and Service Office near You

for over thirty years **Buckeye**

Banish "elbow grease" from your cleaning budget

WHEN cleaning grease from salvaged parts, get rid of elbow grease too! Salvage cleaning need not involve tedious, time-consuming scrubbing and scraping. Put this important operation on a modern efficient basis —banish elbow-grease—let Oakite materials and methods do the work.

When Oakite materials are used, equipment is soaked clean. Valves and fittings, bits, fishing tools and other parts are simply lowered by the basketful into a tank and allowed to remain a short time. When removed, grease, oil and dirt are so thoroughly loosened that a rinse leaves surfaces clean to the metal.

Our Service Man in your locality can give you full particulars on the time, work and money that Oakite cleaning is saving for other oil concerns. Drop us a line and he will call. No obligation is involved of course.

Manufactured only by
OAKITE PRODUCTS, INC., 38G Thames St., NEW YORK, N. Y.
Oakite Service Men, cleaning specialists, are located at

Albany, N. Y., Allentown, Pa., *Atlanta, Altoona, Pa., Baltimore, Battle Creek Mich., *Boston, Bridgeport, *Brooklyn, N. Y., Buffalo, *Camden, N. J., Charlotte, N. C., Chattanooga, Tenn., *Chicago, *Cincinnati, *Cleveland, *Columbus, O., *Dallas, *Davenport, *Dayton, O., Decatur, Ill., *Denver, Des Moines, *Detroit, Erie, Pa., Fall River, Mass., Flint, Mich., Fresno, Calif., *Grand Rapids, Mich., Harrisburg, Pa., Hartford, *Houston, Texas, *Indianapolis, *Jacksonville, Fla., *Kansas City, Mo., *Los Angeles, Louisville, Ky., Madison, Wis., *Memphis, Tenn., *Milwaukee, *Minneapolis, *Moline, Ill., *Montreal, Newark, N. J., Newburgh, N. Y., New Haven, *New York, *Omaha, Neb., Oshkosh, Wis., *Oakland, Cal., *Oklahoma City, Okla., *Philadelphia, Phoenix, Ariz., *Pittsburgh, Pleasantville, N. Y., Portland, Me., *Portland, Ore., Poughkeepsie, N. Y., Providence, Reading, Pa., Richmond, Va., *Rochester, N. Y., Rockford, Ill., *Rock Island, Sacramento, *San Francisco, *Seattle, Springfield, Mass., South Bend, Ind., *St. Louis, *St. Paul, Syracuse, N. Y., *Toledo, *Toronto, Trenton, *Tulsa, Okla., Utica, N. Y., *Vancouver, B. C., Wichita, Kan., Williamsport, Pa., Worcester, Mass.

*Stocks of Oakite materials are carried in these cities.

OAKITE

TRADE MARK REG. U.S. PAT. OFF.

Industrial Cleaning Materials and Methods

PERMITS GRANTED FOR NEW WELLS

CALIFORNIA

BELRIDGE—The Ohio Oil Co., No. 26, 30-28-21.

FRESNO COUNTY—Oceanside Oil Co., No. 2, 33-22-16. Shell Oil Co., B. L. C. "A," 24-19-18; B. L. C. "B," 26-19-18; B. L. C. "C," 27-19-18.

BUTTONWILLOW — Milham Exploration Co., Kern 6, 8-28-23; Crites 1, 8-28-23.

HUNTINGTON BEACH — Texas Holding Co., No. 5, 2-6-11.

KERN RIVER—General Pet. Corp., No. 34, 14-28-27. C. C. M. O. Co, No. 26, 23-28-27.

KINGS COUNTY—Shell Oil Co., B. L. C. "D," 17-19-19.

KETTLEMAN HILLS—Standard Oil Co., No. 87, 3-22-17; G. I. T. 1, 11-22-17. George F. Getty, Inc., Armstrong 6-1, 6-22-18.

LONG BEACH—Fred W. Fitch, Fitch-Lang 1, 24-4-13. Pannill Drilling Co., No. 2, 24-4-13. W. F. Meyer, Meyer 3, 24-4-13; Meyer 4, 19-4-12.

MIDWAY—Republic Pet. Co., No. 35, 7-32-23. Honolulu Cons. Oil Co., No. 32, 7-32-23. Standard Oil Co., No. 221, 1-32-23.

MT. POSO—The Texas Co., Alta Vedder 2, 4-27-28,

NEWHALL — Southern Calif. Drilling Co., Needham 2, 13-3-16.

SANTA BARBARA COUNTY — William Rhoads No. 1, 29-4-27. Major Oil Co., No. 1, 29-4-27. Pacific Western Oil Co. No. 1, 16-4-4-27. Exeter Oil Co., No. 1, 29-4-27. Union Oil Co., Durer 1, 29-4-27. Dunlap and Knapp No. 1, 29-4-27; No. 2, 29-4-27. Western Gulf Oil Co., Hollister 1, (—)-5-33.

SANTA FE SPRINGS — General Pet. Corp., Santa Fe 145-F, 5-3-11; Santa Fe Comm. 186-H, 6-3-11; Santa Fe Comm. 185-E, 6-3-11. H. A. Bardeen, S. F. 3, 6-3-11.

SAN BERNARDINO COUNTY—Urmi Oil Co., Marie 1, 31-2-8.

SAN DIEGO COUNTY — Borderland Exploration Co., Rancho Las Encinitas, Lot 21.

RICHFIELD—Continental Oil Co., Stearns 1, 33-3-9. Superior Oil Co., Guarantee 2, 33-3-9.

ROUND MOUNTAIN—Shell Oil Co., Jewett 3-1, 19-28-29.

SEAL BEACH—Marland Oil Co., Bixby 14, 11-5-12; M. and S. 21, 3-5-12.

SUMMERLAND—Lincoln Drilling Co., 21-4-26.

SUNSET—Standard Oil Co., Graham 1, 7-11-23.

VENTURA—Associated Oil Co., Lloyd 88, 27-3-23; Lloyd 47, 27-3-23; Lloyd 93, 27-3-23; Lloyd 91, 27-3-23.

KANSAS

BUTLER COUNTY—Producers, Holcomb 2, ne sw nw, 8-29-4e. H. B. Garden, Sluss "B" 4, c w½ ne nw, 6-27-6e. Empire, Hess 18, nw se nw, 18-26-5e. Empire, Koogler 81, nw se ne, 19-25-5e. Empire, Koogler 84, se ne, 19-25-5e. Empire, Koogler 83, se nw nw, 20-26-5e. Empire, Koogler 82, sw nw nw, 22-26-5e. Carter, Stone 11, (OWDD) sw se nw, 2-25-5e. Lilly and Schreck, Nuttle 1, c nw, 10-25-5e. Maxwell, Maxwell 1, sw ne, 31-24-4e.

CHAUTAUUA COUNTY — The Prairie, Foster 1, ne sw, 13-34-9e.

COWLEY COUNTY—Wakefield et Osborne, Moore 1, se ne nw, 19-30-5e. Krow White, McEwin 1, c se sw, 4-32-5e.

ELK COUNTY—Frantz et al, Spray 1, sw se sw, 12-31-10e.

GREENWOOD COUNTY—Transcontinental, Holland 1, sw ne, 36-23-11e. Empire, Patterson "B" 1, se sw nw, 36-23-11e. Empire, Patterson "A" 2, se ne sw, 36-23-11e. Prairie, Parrish 1, nw ne, 16-24-12e.

HARVEY COUNTY—E. W. Marland et al, Neiman 1, sw se, 26-22-2e.

HODGEMAN COUNTY — Phillips, Hauseman 1, nw ne ne, 30-22-22w.

McPHERSON COUNTY—E. W. Marland et al, Swenson 1, ne sw ne, 36-18-4w.

MARION COUNTY—Shell, Scully 1, nw ne, 34-18-2e.

NESS COUNTY—Marland, Moses 1, ne se, 7-18-25w.

RENO COUNTY—Skelly, Gypsy, Amerada Pet., and The Prairie, Birkett 1, ne sw, 30-24-7 west.

SEDGWICK COUNTY—Kellar and Lewis, Buckles 1, nw se, 3-28-1w. Milmac, Stuckey 1, nw, 22-28-1e. Derby, Blood 1, nw sw, 28-28-1e. E. W. Marland, Inc., Mackey 1, se nw sw, 30-27-2e. Davis and Skelly, Wilson 9, sw ne, 1-26-1w. Davis and Skelly, Wilson 10, sw nw ne, 1-26-1w. Bu-Vi-Bar et al, Miles 1, ne sw sw ne, 7-26-1e. Bu-Vi-Bar, Shawver 7, nw, 7-26-1e. Derby, Hladik 1, sw se sw, 15-26-2e. W. F. Kenny et al, Richard 1, ne sw sw, 15-26-2e.

SUMNER COUNTY—Champlin Oil & Ref. Love 2, (OWDD) ne nw sw, 9-30-2w. Laredo, Welch 1, sw se, 9-34-1e. Tidal, McCutcheon 1, sw, 23-34-2e.

WOODSON COUNTY—Mellrose & Sullivan, Eckhoff 1, ne nw, 35-23-14e.

OKLAHOMA

CARTER COUNTY—Ven Mex, Denny 1, se sw sw, 20-1s-3w.

COTTON COUNTY — Cullum & Perkins, Patterson 1, sw se ne ne, 4-2s-10w.

CREEK COUNTY — Magnolia, Musselman 21, se sw ne, 8-18-7e. Wells et al, Tahledge, cwl nw nw 10-18-11e. Apex, Fife 3, ne sw sw, 28-18-11e. Mid-Continent, Stewart 30, sw, 15-17-7e. Sinclair, Dacon 8, sw se se, 16-17-7e. The Texas Co., Gooden 12, (OWDD) sw se, 16-17-7e. Central Commercial, Bucktrot 1, nw se sw, 26-17-10e. Henry-Avers, Harris 1, (OWDD) se sw se, 12-17-10e. Roxaline, Chamberlain 1, c se se, 28-17-12e. C. G. Tibbens, Lucas 3, se nw nw nw, 31-15-9e. Shaffer et al, Lewis 3, ne sw sw, 10-15-8e. W. H. Elson et al, McKee 1, sw, 6-14-10e.

GRANT COUNTY — Consolidated Utility, Sheeper 1, c ne ne, 2-27-3w. Consolidated Utility Co., Secatt 1, c se sw, 35-28-5w. Consolidated Utility, Henn 2, c sw ne, 35-28-3w.

JEFFERSON COUNTY— O. V. Beck, Seay 3, se 5w, 34-6s-6w.

KAY COUNTY—Tillery et al, Buzelton 2, c ne sw, 5-27-1e. George Nehr et al, Galloup 2, csl sw sw, 30-28-1e.

KIOWA COUNTY—Rymer et al, Hebbs 1, se sw sw, 7-6n-16w.

MUSKOGEE COUNTY — H. Burke et al, Walker 1a, csl sw sw, 7-15-18e. Bryan Pet., Simmon 3, c nw sw, 3-15-15e.

OKFUSKEE COUNTY—C. O. Buckels et al, Tarvin 1, nw se, 9-11-10e. Burke-Greis, Hawkins 1, sw se ne, 33-11-11e. Kingwood et el, Simmer 2, nwne sw, 2-10-11e. W. L. Umburn, Robinson 1, nw ne sw, 12-10-11e. Misener and Kingwood, Robinson 2, se sw nw, 12-10-11e.

OKMULGEE COUNTY — Tiger Mountain, Tucker 4, csl ne se, 2-13-14 east.

OSAGE COUNTY — Peters and Producers and Refiners, 2, nw ne, 27-27-11. Clint Moore Estate et al, 3, se ne nw, 16-21-9e.

PONTOTOC COUNTY—Boucher, Hardin 1, sw nw nw, 31-4n-7e.

POTTAWATOMIE COUNTY—The Prairie, et al, Rice 2, ne se ne, 17-7-4e. The Prairie et al, Cummings 2, se ne ne, 17-7-4e. The Prairie and T. B. Slick, Laster 4, sw se ne, 19-6-4e. The Prairie and T. B. Slick, Laster 5, se sw ne, 19-6-4e. Phillips, Reed 2, se nw nw, 8-9-5e. Barnsdall and Indian Territory Illuminating, School Land 1, se sw sw, 16-8-5e. Atlantic Oil Producing & Independent, Burke 2, nw ne, 16-7-4e. Independent and Westland Oil, Rhodd 4, se nw nw, 16-7-4e. Independent, & Westland, Rhodd 3, ne nw nw, 16-7-4e. Darby Pet., Youngblood 3, ne nw, 16-7-4e. Magnolia, Robbins 1, (OWDD) ne se se, 15-7-4e. Independent & Westland, Booze 1, sw ne se, 9-7-4e. T. B. Slick, Bledsoe 5, sw nw sw, 20-6-4e.

SEMINOLE COUNTY— Shaffer, McKoy 3, se sw sw, 36-10-5e. Carter, Mayhue 1, sw ne sw, 11-9-6e. Marland & Shaffer, Harris 3, nw sw, 4-7-7e. Sunray, & Cal-Cul, Joanna 3, nw sw, 24-5-7e. Producers & Refiners, Thomas 2, se nw, 5-7-7e.

STEPHENS COUNTY — Pace et al, McMasters 5, ne nw ne, 13-2s-8w. Magnolia, Burke 10, sw se sw ne, 34-1s-8w. Twin State, Cole 3, ne se, 14-1s-4w.

TULSA COUNTY—Glidden, Phillips 1, cel nw sw, 15-19-11e.

LOUISIANA

BOSSIER PARISH—Palmer Corp., Shreveport, Schnitt 1, 14-17n-12w, 1980 ft n and 660 ft w of se c sw se. Woodley Pet. Co., Shreveport, Whitehurst 5, 35-16n-12w, 1550 ft e and 425 ft s of nw c. Woodley Petroleum Co., Shreveport, Whitehurst 6, 34-16n-12w, 20,998 ft e and 1584 ft n of sw c T 16n, R 12w in Sec. 34.

CADDO PARISH—D. C. R. Oil Co., Inc., Shreveport, Pope W. Oden 1, 20-19n-14w, 264 ft s and 264 ft w of ne c nw. Gulf Refg. Co. of La., Shreveport, Pope D. Oden 3, 18-19n-14w, 990 ft w and 330 ft s of ne c. Gulf Refg. Co. of La., Shreveport, Pope W. Oden 4, 18-19n-14w, 990 ft s and 990 ft w of ne c. Lide & Davidson, Shreveport, Pope W. Oden 1, 21-19n-14w, 300 ft n and 300 ft w of se c. Ray-Dawes Drilling Co., Shreveport, S. S. Hunter Est., Inc. 2, 8-19n-14w, 330 ft n and 330 ft w of se c nw. Standard Oil Co. of La., Shreveport, W. K. Henderson 2, 7-19n-14w, 990 ft w and 225 ft n of se c. Standard of La., Shreveport, Est. of S. S. Hunter, Inc. 5, 17-19n-14w, 330 ft s and 220 ft e of nw c. Standard Oil Co. of La., Shreveport, P. W. & P. D. Oden 2, 18-19n-14w, 990 ft w and 330 ft s of ne c se. Woodley Pet. Co., Shreveport, Knight A-4, 35-16n-12w, 22,991 ft e and 1273 ft n of sw c T 16n, R 12w in Sec. 35.

CALCASIEU PARISH — Rex Pet. Corp., Vinton, La., Hunter 10, 21-9s-11w, 965 ft n and 440 ft e of sw c se.

DE SOTO PARISH—Benedum-Trees Oil Co., Pittsburgh, State of La. 2, 22-14n-12w, 1700 ft s and 1350 ft w of ne c. Lide & Ford, Shreveport, J. M. Nabors 1, 32-12n-11w, 200 ft n and 200 ft e of sw c se sw. Thomason & Fitzwilliams, Shreveport, Nabors 1, 6-12n-11w, 3162 ft e and 152 ft s of nw c.

LA SALLE PARISH—La. Oil Refg. Corp., Shreveport, Tremont Lbr. Co. B-39, 25-10n-1e, 1940 ft s and 900 ft w of ne c.

MOREHOUSE PARISH—Grecian Gas Co., Monroe, Seacrease 1, 14-20n-4e, 2025 ft s and 203 ft w of ne cor of se¼. Natural Gas Producing Co. of La., Bastrop, Tensas Delta 15, 4-22n-4e, 687 ft n and 600 ft e of sw c nw.

RICHLAND PARISH—W. C. Feazel, Monroe, Haynes & Vincent 1, 17-16n-6e, 257 ft s and 1439 ft e of nw c ne. Magnolia, Shreve-

WEEKLY COMPARISON OF NEW WELLS

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas, California and the Mountain States:

	Week ending June 15	Previous week	Total this month	Total this year	This week Last Yr.	This month 1928	1928 year total
Arkansas	1	5	8	62	21	66	331
California	48	19	92	627	30	64	1,207
Louisiana	24	16	53	351	14	47	680
Kansas	38	20	75	453	6	64	1,032
Oklahoma	54	81	182	1,378	71	202	3,744
Texas	193	197	546	3,680	218	473	8,297
Total	358	338	956	6,551	360	906	15,291

port, C. M. Noble 3, 35-16n-5e, 200 ft s and 660 ft e of nw c sw nw; C. M. Noble 4, 34-15n-5e, 400 ft s and 660 ft w of ne c se ne.

TERREBONNE PARISH—The Texas Co., Shreveport, Dog Lake B-1, 6-22s-16e, 1144 ft w and 701 ft s of ne c.

WEBSTER PARISH — Standard of La., Shreveport, Bodcaw Lbr. Co. B-22, 28-21n-10w, 690 ft s and 630 ft e of center.

TEXAS

ARCHER COUNTY — Continental Oil Co., Wichita Falls, J. T. Richardson, B 117, B3, B 10, T. McCoy sur, 329 ft e of No. 2. Johnson & Fraser, Wichita Falls, C. E. Graham, 319, 1, F. Gibernath sur, 1446 ft from n and 950 ft from e line. Russell & Wilson, Wichita Falls, H. O. Prideaux, 55, 12, A. Rohus sur, 315 ft se of No. 11. J. H. Turner, Wichita Falls, B. Z. Lyles, 40, 1, S 2, S.P. Ry. sur, 810 ft from e and 450 ft from s line. C. W. Boller, Wichita Falls, J. R. Peters, 34, 1, J. R. Peters sur, 150 ft from s and e lines. Hi Land Oil Co., Wichita Falls, L. F. Wilson, 40, 1, B.B.B.&C. sur, 150 ft from n and w lines. A. W. Johnston, Graham, J. R. Garvey, 320, 1, 1802, T.E.&L. sur, 825 ft from s and 600 ft from e line of Sec. Eddleman & Payne, Inc., Wichita Falls, Parrish, A 22, 4, S 2, S.P. Ry sur. United Prod. Co., Wichita Falls, W. H. Taylor, 20, 3, B 11, Amer. Trib. sur, 300 ft e of No. 1 in Lot 17. F. L. Grebin, Wichita Falls, W. T. Graham, 40, 1, B 23, L. M. Meade sur, 450 ft from w and 150 ft from s line. E. B. Madden, Olney, J. T. Richardson, 125, 18, S. Anderson sur, 1350 ft from w and 156 ft from s line. L. T. Burns, Wichita Falls, L. W. McCrory, 40, 1M, B 114, Amer. Trib. sur, 150 ft from s and w lines of B 114. Shappell Oil Co., Wichita Falls, J. D. Lyles, 160, 6, S 234, Hooper & Wade sur, 300 ft n of No. 3. Petroleum Prod. Co., Wichita Falls, M. Phillips, 50, 4, B.B.B.&C. sur, 362 ft s of No. 3. J. P. Coleman, Wichita Falls, J. Longley, 40, 1, B 98, H.C.S.L. sur, 150 ft from n and e lines, se¼ of B 98. Prairie O. & G. Co., Ranger, D. Thompson, 3, S 13, T. McCoy sur, sw corner. Gilliland-Roser, Wichita Falls, G. H. Roach, 80, 3, 1595, T.E.&L. sur, 454 ft from e and 450 ft from s line S 1595. T. F. Hunter, Wichita Falls, Bishop, 160, 1, B 52, G. P. Meade sur, north central part of B 52. Humble, Wichita Falls, J. H. Turbeville, B 157, 1, R. Carson sur, 2150 ft from e and 150 ft from s line; W. L. Kunkel, 40, 3, S 3, B.B.B.&C. sur, 300 ft w of No. 2. Fair-McGaha Oil Corp., Wichita Falls, W. H. Taylor, A 20, 2, S 17, Amer. Trib. sur, Lot 1, 300 ft e of No. 1; W. J. Logan, B 160, 8, A. Arms sur, 150 ft from e and 1050 ft from s line. Moran Drilling Co., Wichita Falls, J. M. Bloodworth, 150, 2A, M. Cartwright sur, 450 ft from n and 2035 ft from w line. Continental Oil Co., & Cullum, Wichita Falls, F. C. S. L., 100, 2, B 9, Falls C. S. L. sur, 200 ft from e and 600 ft from s line B 9. Petroleum Prod. Co., Wichita Falls, A. M. Kunkel, 40, 3B, S 3, B.B.B.&C. sur, 300 ft w of No. 2. Prairie Oil & Gas Co., Ranger, T. McCoy, 1, B 14, T McCoy sur, 150 ft from w and 450 ft from s line of B 14. Brown Farm Oil Co., Wichita Falls, E. T. Brown, 277, 4, S 2, S.P. Ry. sur, 300 ft e of No. 2. United Prod. Co., Wichita Falls, L. W. McCrory 35, 1J, B 7, Geraldine sur, 750 ft from w and 631 ft from s line B 7.

AUSTIN COUNTY — Humble, Houston, M. Mahnke, 1, A. Ives sur, 300 ft from sw and 521 ft from se line.

BROWN COUNTY — Venmex Oil Co., Wichita Falls, R. Hickman, 50, 5, T. Benson sur, 150 ft from s and w lines. Humble, Wichita Falls, H. Byler, 80, 13, S 43, T.&N.O. sur, 552 ft from — and 450 ft from e line. J. C. Van Bebber, Brownwood, C. G. Evans, 320, 1, S 16, C. S. Corbett sur, 150 ft from s and w lines.

BLANCO COUNTY — J. E. Forbes et al, Fort Worth, E. Bruckner 1, Z. Hemphill sur, 2640 ft from n and 150 ft from e line of survey.

CALLAHAN COUNTY—Gibson & Johnson, Abilene, C. B. Snyder, 40, 6B, S 140, B.B.B.&C. sur, 150 ft from e and 450 ft from s line sw¼ of ne¼. R. W. Mancill, Cisco, R. D. Williams, 60, 1. S 139, Univ. Lands sur, 1470 ft from n and 510 ft from e line. Moutray Oil Co., Abilene, B. W. Owens, 40, 1, S 20, D.&D. Asy. sur, 150 ft from s and e lines of n ½. M. C. McDonald, Putnam, A. S. Lobban, 200, 6, 2995, T.E.&L.T. sur. T. P. Coal & Oil Co., Thurber, C. C. Westerman, 50, 14, S 54, B 181, C.C.S.L. sur, 175 ft from n and w lines. J. H. West, Cisco, W. M. Abel, 40, 1, S 32, D.&D. Asy. sur, 150 ft from n and w lines. Woodley Pet. Corp., Shreveport, La., E. L. Finley, 120, 4A, S 74, Bayland Asy. sur, 450 ft from n and 660 ft from w line se¼ sw¼. Texas Co., Wichita Falls, P. G. Hatchett, 40, B4, S 23, D.&D. Asy. sur, 300 ft ne of No. 1. L. G. Bradstreet Co., Fort Worth, J. L. Cavanaugh A 60, 2, B 98, C.C.S.L. sur, nw corner.

CALDWELL COUNTY—Humble, Houston, C. Smith, B 30, 4, J. Hinds sur, 150 ft from n and e lines; C. Smith, A 20, 2, J. Hinds sur, 150 ft from n and w lines; J. A. Northcutt, A 25, No. 2, J. Hinds sur, 450 ft from s and 150 ft from e line; L. G. Hanson, 82, 6, J. Hinds sur, 1001 ft from e and 150 ft from s line; L. G. Hanson 5, 701 ft from e and 150 ft from s line; T. Briscoe, 56, 2, J. Hinds sur, 450 ft from w and 150 ft from s line. Golden West Oil Co., San Antonio, C. Malone, 54, 2, A. Floyd sur, 200 ft from n and 150 ft from w line; C. Malone 1, 150 ft from n and w lines. Shell Pet. Corp., Houston, C. F. Dye, 61, 2, J. Hinds sur, 150 ft from e and 450 ft from s line; C. Smith, 33, 2, J. Hinds sur, 450 ft from e and 150 ft from s line. H. C. Ratcliff, Lockhart, J. E. Caldwell, 300, 1, Jno. P. Bell sur, 150 ft from n and w lines.

CARSON COUNTY—Gulf Prod. Co., Fort Worth, C. R. Garner, 160, 1, S 106, B 4, I.&G. N. sur, 330 ft from n and e lines of sw¼; J. L. Noel, 160, 7, S 198, B 3, I.&G.N. sur, 330 ft from n and e lines of sw¼. Travis & Reiger, Amarillo, J. B. Hodges, 160, 1, S 112, B 7, I.&G.N. sur, 990 ft from w and 330 ft from s line sw¼ nw¼. Ryan Consolidated Pet. Corp., Tulsa, Okla., B. F. Block, 160, 4, S 111, B 4, I.&G.N. sur, 330 ft from e and 990 ft from n line ne¼. Herrogan Oil Corp., Pampa, L. C. McConnell, 80, 1, S 187, B 3, I.&G.N. sur, 330 ft from n and w lines w½ of sw¼.

COLEMAN COUNTY—Taylor-Link Oil Co., San Angelo, G. R. McClure, 326, 1, S 105, E.T. Ry. sur, 150 ft from n and w lines of se¼. C. S. Willmott, San Saba, J. T. Vaughn, 160, 3, No. 79, B.&S. sur, 1470 ft from w and 800 ft from s line No. 79. Continental Oil Co., Wichita Falls, M. T. Overall, 12, B 1, G.H.&H. sur, 600 ft from w and 200 ft from s line. Jamison, Pollard & Forster, Coleman, J. H. Hutchins, 80, 1, S 11, B 1, G.H.&H. sur, 200 ft from n and 380 ft from w line. Continental & Atlantic Oil Prod. Co., Wichita Falls, M. T. Overall, 120, 5, No. 700, J. H. Barclay sur, 600 ft e of No. 4.

CRANE COUNTY—Church & Weekley, Fort Worth, University, 80, 3, S 39, B 30. Univ. sur, 660 ft n of No. 1, w & of sw¼.

CROCKETT COUNTY — Taylor-Link Oil Co., San Angelo, L. P. Powell, 83, S 52, B BB, W. D. Parker sur, se cor Lot 44.

CONCHO COUNTY—Guardian Oil Co., & Turner, San Angelo, J. H. Brosig, 160, 1, No. 1, D. E. Simmons sur, north central part of lease.

COOKE COUNTY—Lloyd Oil Corp., Fort Worth, J. L. Newman, 100, 1, C. Collingsworth sur, 150 ft from n and 1700 ft from e line. Texas Co., Wichita Falls, J. C. Embry, 133, 1, R. Rogers sur, 150 ft from e and 1358 ft from s line.

CLAY COUNTY — Merrick & Belcher, Wichita Falls, B. Landrum, 100, 1, B 5, P.C.S. L. sur, 150 ft from e and 835 ft from s line.

DUVAL COUNTY—Magnolia Pet. Co., Dallas, R. H. Corbett 1, S 96, G.H.&H. sur, 1074 ft from nw and 1800 ft from ne line. S. & O. Oil Co., Corpus Christi, Hahl, 34, 3, S 250, B 23, Rosita sur, 150 ft from s and e lines. Magnolia, Dallas, J. Lopez, 960, 1, S 355, J. Poitevent sur, 660 ft from n and w lines.

EASTLAND COUNTY—TexWa Oil Co. & Kirk, Cisco, J. R. Turney, 40, 2, S 30, B 2, H.&T.C. sur, 150 ft from e and 465 ft from s line ne¼ nw¼; L. Palmer, 76, 1, S 29, B 2, H.&T.C. sur, 270 ft from w and 150 ft from s line 2½ se¼. Conway Bros. & Champion, Wichita Falls, J. W. Simmons, 160, 4, B 27, McL. C.S.L. sur, 600 ft e of No. 1 B 27. W. E. Davis et al, Eastland, W. D. Craig, 40, 1, S 30, B 2, H.&T.C. sur, 1300 ft from e and 150 ft from n line. States Oil Corp., Eastland, A. Hise, 160, 6, S 17, B 4, H.&T.C. sur, 870 ft from n and 757 ft from e line se¼. Kokomo & Phillips Pet. Corp., Gorman, W. E. Clements, 251, 1, S 10, B1, H.&T.C. sur, 1320 ft from e and 330 ft from s line sw¼.

FORT BEND COUNTY—Gulf Prod. Co., Houston, E. Trone, 12, S 67, H.&T.C. sur, 600 ft from n and w lines.

GRAY COUNTY—Humble Oil & Refg. Co., Wichita Falls, Wm. Jackson, 96, 1, S 90, B B2, H.&G.N. sur, 330 ft from s and w lines. Texas Co., Wichita Falls, G. H. Saunders, 298, 11, S 3, B.&B. sur, 620 ft from e and 400 ft from n line; G. H. Saunders, 74, 12, J. C. Eustis sur, No. 1, 911 ft from e and 300 ft from s line; 13, 911 ft from e and 925 ft from s line; J. B. Bowers, 160, 9, S 89, B B2, H.&G.N. sur, 330 ft from n and 975 ft from e line S 89; 8, 1635 ft from e and 330 ft from n lines S 89; S. Faulkner, 160, 3, S 29, B B2, H.&G.N. sur, 1313 ft from w and 380 ft from n line S 29; J. M. Patton, 165, 3, S 61, B B2, H.&G.N. sur, 1406 ft from w and 275 ft from s line S 61; Wm. Jackson, 160, 1, S 60, B B2, H.&G.N. sur, 330 ft from s and w lines e½ Sec. 60; Cooms-Worley, 80, 2, S 36, B 3, I.&G.N. sur, 330 ft from s and w lines of s½ of se¼; W. C. Archer, 80, 1, S 174, B 3, I.&G.N. sur, 330 ft from s and w lines of s½ of se¼. Gulf Prod. Co., Fort Worth, P. A. Worley, A 160, 1, S 36, B 3, I.&G.N. sur, 330 ft s and e lines of sw¼; S. Faulkner, A 320, 1, S 33, B B2, H.&G.N. sur, 330 ft from n and e lines of s½; Wm. Jackson, 160, 4, S 62, B B2, H.&G.N. sur, 686 ft e of No. 3; 3, 276 ft from n and 718 ft from w lines Sec. 62. McMan O. & G. Co., Tulsa, Okla., J. H. Palmer, 100, 2, S 31, B B2, H.&G.N. sur, 330 ft from n and e lines. H. F. Wilcox O. & G. Co., Tulsa, Okla., Coombs, 160, 8, S 60, B 3, I.&G.N. sur, 330 ft from s and e lines of sw¼; 7, 330 ft from s and w lines. Phillips Pet. Corp., Bartlesville, Okla., Jackson, 80, 6, S 88, B B2, H.&G.N. sur, 661 ft e of No. 5.

GRAYSON COUNTY—F-H-E Oil Co. & Kimbell, Sherman, D. P. Mauldin, 160, 1, L. T. Loveall sur, center of nw¼ of sw¼. Texas State Oil Co., Fort Worth, Guilloud, 40, 1, J. Ingram sur, 371 ft s of center of n line.

GALVESTON COUNTY — Gulf Prod. Co., Houston, G. E. Smith, 200, 9, M. Dunman sur, east central.

HOWARD COUNTY—Cosden Oil Co., Fort Worth, D. Roberts, 360, 5, S 129, B 29, W. & N.W. sur, 330 ft from s and e lines of sw¼.

HARRIS COUNTY—South Texas Pet. Co., Houston, Morris, 100, 6, W. T. Charles sur, nw corner.

HARRISON COUNTY—Nick Barbare, Waskom, J. W. Furrh, 9, 15, J. Short sur, 5732 ft from n and 3699 ft from e line of survey.

HUTCHINSON COUNTY—Skelly Oil Co., Tulsa, J. A. Whittenburg, 134, 7, B 7, No. 22, 1620 ft from w and 330 ft from s linee; 2280 ft from w and 330 ft from s line. Rock Creek Oil Corp., Amarillo, Johnson, 80, 3, S 28, B Y A&B sur, se cor of w½ of se¼; 4, ne cor of sw¼ of se¼. C. B. Penney, Amarillo, Johnson, 160, 2, S 35, B Y A&B sur, 330 ft from s and w lines of e½ of ne¼.

IRION COUNTY—J. B. Crawford, San Angelo, W. H. Williams, 1, B 8, GCSL sur, nw cor of ne¼ of nw¼.

JEFFERSON COUNTY—Unity Oil Co., Beaumont, Gladys 3, 15, B 27, J. A. Veatch sur, 35 ft from n and 32 ft from e line. Yount-Lee Oil Co., Beaumont, Gladys, 93, B 100, J. A. Veatch sur, 9 ft e and 145 ft s of ne cor of blk. 100.

JONES COUNTY—Phillips Pet. Corp., Bartlesville, Okla., M. C. Low, 166, 2, S 15, B 19, T&P sur, 990 ft from n and w lines.

JACK COUNTY—R. P. Dorian et al, Wichita Falls, J. R. Moore, 40, 1, B 1, S. P. Ry. sur, 150 ft from s and w lines. C. A. Fluty, Norman, Okla., S. F. Maxey, 80, 1, S 1, J. W. Maxey sur, 150 ft from w and 1170 ft from s line. Pete Shabay, Jacksboro, O. Loving, 265, 1, 2746, TE&L sur, 229 ft from w and 1701 ft from s line. A. Minnich, Archer City, C. C. Bloodworth, 80, 4B, J. F. Franklin sur, 1220 ft from e and 1608 ft from s line. Osage Oil Corp. & Steed, Wichita Falls, S. Newman, 40, 1, N. Overby sur, 660 ft from n and 870 ft from e line.

JIMM HOGG COUNTY—Deep Rock Oil Co., Fort Worth, A. M. Kelsey, 640, 1, B 20, Las Animas sur, 1320 ft from n and e lines of Blk. 20.

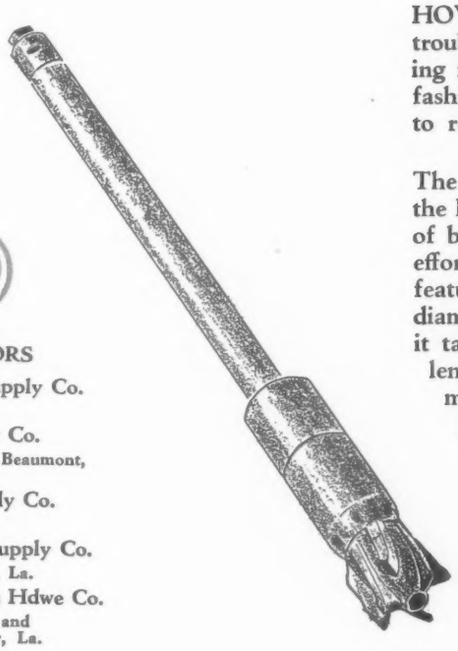
LIBERTY COUNTY—Duho Oil Co., Houston, Quintette, 30, 7, C 125, H&TC sur, se corner.

LAMPASAS COUNTY—F. B. Davis, Dallas, J. F. White, 80, 2, B 104, B. Kendrick, center.

LEE COUNTY—Alexander Oil Co., Giddings, G. Zoch, 320, 1, J. P. Ferrell sur, 450 ft from e and 1320 ft from s line.

MONTAGUE COUNTY—Farlyn Oil Co.,

Only a split liner ~ *will give you an* unbroken core



HOW MANY times have you gone to a lot of trouble to take a core, only to mess it up in removing it from the barrel? The construction of old-fashioned barrels makes it just about impossible to remove a core unbroken.

The Split Liner, an exclusive patented feature of the PERFECTION Core Barrel, eliminates all risk of breaking the core when you remove it. Time, effort and money are all saved by this simple feature. Cutter heads are faced with metal of diamond-like hardness to core any formation. And it takes cores from 7 feet 6 inches to 20 feet in length. Sturdy construction and moderate price make the PERFECTION Core Barrel a tool you cannot afford to be without. Write today for free descriptive catalog.

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The Brewster COMPANY ~ INC.
SUCCESSORS TO OIL CITY IRON WORKS INC.
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Houston, R. W. Cunningham, 61, 1, L. B. Norton sur, 150 ft from w and 1050 ft from n line.

NAVARRO COUNTY—Riverland Oil Co., Tulsa, Okla., J. H. Finch, 1400, 1, W. H. Hardeman sur, sw center part of lease.

PECOS COUNTY—Gibson & Johnson, Abilene, J. M. Grace, 80, 1, S 3, B 179, T. C. Ry. sur, 330 ft from n and w lines of w½ of ne¼. Phillips Pet. Corp., Bartlesville, Okla., D. W. Bowser, 1, S 77, B OW, T&M sur, 250 ft from n and e lines of ne¼. Marland Prod. Corp., Fort Worth, I. G. Yates, 320, S 15, S 60, B 1, I&GN sur, 240 ft from w and 715 ft from n line of e½; S16, 290 ft from w and 749 ft from n line of e½; S17, 591 ft from n and 2593 ft from w line; S18, 1129 ft from n and 2769 ft from w line of e½; S19, 1252 ft from n and 2736 ft from w line; S20, 1446 ft from n and 3400 ft from w line. Mid-Kansas O. & G. Co., Tulsa, Okla., I. G. Yates, A 29, SF, 12341, ne cor of SF 12341.

PANOLA COUNTY—Thomason Drilling Co., Shreveport, La., I. H. Crenshaw, 80, 13, B. C. Jordan sur, 200 ft from s and w lines; A. Mays, 100, B1, J. Thorpe sur, 305 ft from w and 512 ft from s line. Texas Co., Shreveport, T. C. Adams, 238, A 11, S. B. Lacey sur, east central part of lease; A 12, 1400 ft from s and 520 ft from e line. Natural Gas Prod. Co., Shreveport, La., Floyd, 114, 6, B. C. Jordan sur, south central part of lease.

PRESIDIO COUNTY—Brite Prod. Co., Marfa, Brite, 640, 3, S 245, B 4, H&TC sur, 271 ft from n and 1188 ft from e line.

SHACKLEFORD COUNTY—Rathke Oil Co., Wichita Falls, E. E. Whitney, 80, 1, S 517, TE&L sur, east corner of lease. Warren-Hayes Oil Corp. & Keyes, Cisco, Broyles, 80, 1, S 16, L. A. L. sur, 450 ft from n and 750 ft from e li s½ of nw¼.

STEPHENS COUNTY—Lone Star Gas Co., Dallas, J. M. Townsend, 160, 1, S 1, B. C., S. P. Ry. sur, 987 ft from n and 615 ft from e line; I. A. Calloway, 384, 1, S 461, B. C., S. P. Ry. sur, 1000 ft from n and w lines of s 461.

THOCKMORTON COUNTY—Conway Bros. & Woodson Oil Co., Ranger, J. G. Overcash, 80, 3, 960, TE&L sur, 300 ft e of No. 1. Shappell Oil Co., Wichita Falls, UCSL, 40, 2, B 27, UCSL sur, 450 ft from n and 550 ft from e line of b 27. C. A. Pennell, Loving, C. L. Downing, 50, 1, 913, TE&L sur, 150 ft from s and w lines.

VAN ZANDT COUNTY—Pure Oil Co., Fort Worth, L. A. Smith, 40, 1, Jno. Walling sur, 150 ft from n and e lines.

WICHITA COUNTY—Rubsam & Hunter et al, Wichita Falls, W. D. McClure, 40, 7, B 5, GC&SF sur, 300 ft n of No. 6. Harry Hins, Wichita Falls, T. L. Burnett, 25, 6A, S 6, G. P. Meade sur, 300 ft n of No. 1. Jno. O'Neil, Wichita Falls, Rio Bravo, 77, 30, S 31, B 5, H&TC sur, 570 ft from e and 1320 ft from s line. Panhandle Refg. Co., Wichita Falls, T. L. Burnett, A 80, A6, S 6, G. P. Meade sur ,300 ft w of No. 2. Magnolia Pet. Co., Dallas, B. Ramming, 143, 6, C. I. Bo. sur, 500 ft s of No. 5. King Royalty Co., Wichita Falls, S. B. Burnett, 60, 11, S 9, HT&B sur, 150 ft from s and w lines. F. B. Jackson Jr., et al, Wichita Falls, S. Mitchell, 39, 1, P. Castleman sur, 1050 ft from n and 150 ft from w li b 23. American Refg. Properties, Wichita Falls, E. Morgan, 38, 6, L. Meadows sur, 150 ft from e and 1050 ft from s line. Golding & Cochran, Wichita Falls, J. & J. Waggoner, A 40, 4, S 22, H. George sur, 324 ft w of No. 3.

WILBARGER COUNTY—Grayback Dev. Co., Wichita Falls, W. T. Waggoner, 80, 5, S 40, MEP&P sur, 300 ft n of No. 1. Fain-McGaha Oil Corp., Wichita Falls, W. T. Waggoner, W 100, 9, S 32, B 4, H&TC sur. Grayback Dev. Corp., Box 434, Wichita Falls, W. T. Waggoner, 80, 2, S 40, MEP&P sur, 300 ft n of No. 1. Empire G. & F. Co., Wichita Falls, W. T. Waggoner, 160, 16B, S 32, B 4, H&TC sur, 850 ft from s and 1059 ft from w li S32; 14B, 1059 ft from w and 1710 ft from s line s 32; 15B, 1160 ft from s and 1609 ft from w li s 32; 13B, 205 ft from w and 90 ft from n li sw¼ sw¼. Fain-McGaha Oil Corp., Wichita Falls, W. T. Waggoner, W 100, 10, S 32, B 4, H&TC sur, 50 ft e of No. 2; 7, 610 ft from s and 150 ft from w line. Texas Co., Wichita Falls, W. T. Waggoner, 363, S 4, B 13, H&TC sur, ne cor of Sec. 4. V. I. Grisham, Wichita Falls, W. T. Waggoner, 160, 1, S 37, B 4, H&TC sur, 1072 ft from n and 1883 ft from e line.

WHEELER COUNTY—Texas Co., Wichita Falls, C. Hicks, 160, 1, S 53, B 17, H&GN sur, 660 ft from n and e line of sw¼. Gibson Oil Corp., Amarillo, W. E. Bentley, 40, 8, S 42, B 24, H&GN sur, 660 ft e of No. 1 nw¼ of se¼. Mudge Oil Co. of Texas, Duncan, C. Hicks, 120m, 3, S 52, B 17, H&GN sur, 660 ft from n and e lines of nw¼. Northern Texas Utilities Co., Wichita Falls, J. W. Gooch, 560, 2, S 81, B 23, H&GN sur, 966 ft from s and 200 ft from e line s 81. Rook & Vaughn, Shamrock, E. L. Woodley, 40, 1, S 21, B 24, H&GN sur, center of ne¼ of ne¼.

WEBB COUNTY—Magnolia Pet. Co., Dallas, A. Benavides, 280, 1, S 660, SK&K sur, 660 ft from s and e lines; M. Benavides, 80, 1, S 660, SK&K sur, 660 ft from n and e lines; C. Benavides, 1, S 662, SK&K sur, 660 ft from n and e lines. Trussell, Cezeaux & Putnam, Inc., Laredo, A. M. Bruni, 40, 3, S 10, B 30, M. Arispe sur, 150 ft from ne and 300 ft from nw line.

WASHINGTON COUNTY—Sun Oil Co., Beaumont, R. Caraway, 50, 2, J. F. Perry sur, 151 ft from w and 755 ft from s line.

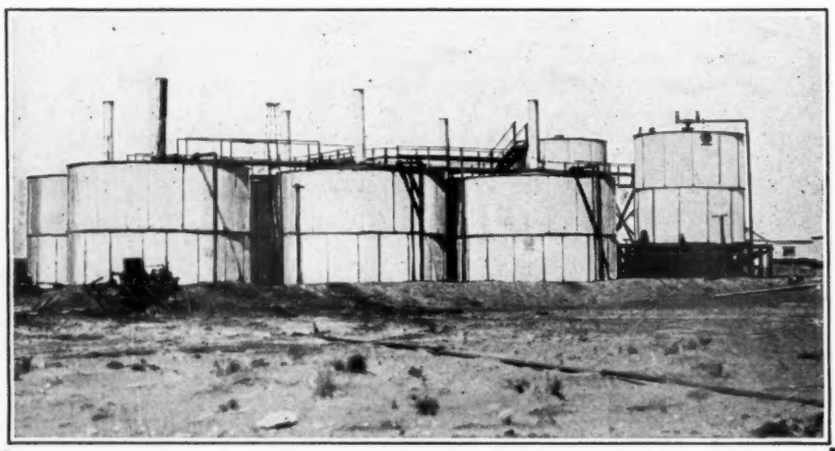
WINKLER COUNTY—Cinderella Synd., Wink, Stevens, 40, 1, S 42, B 26, 330 ft from s and e lines w½ ne¼ of nw¼. Dixie & Southern Crude Oil Pur. Co., Fort Worth, I. Hendrick, 445, M 33, S 33, B 26, 2530 ft from n and 990 ft from e lines s 33.

YOUNG COUNTY—Jno. A. Dixon, Dallas, Jewell, 40, 1, 233, TE&L sur, 450 ft from n and 150 ft from w line. Underwood Drilling Co. & Wooten, Reed & Ginsburg, Graham, S. Bagleys, 20, 1, J. Franklin, center. S. F. Kimbrell, Ardmore, J. R. Dyer, 80, 5, W. W. Stroud sur, 350 ft ne of No. 4. Steed & Gaus, Wichita Falls, S. E. Snider, A 18, 1A, R. Wilson sur, 150 ft from n and e lines. Schermerhorn Oil Co., Tulsa, W. A. Thompson, 47, 5, 2692, TE&L sur, 800 ft nw of No. 4. Cunningham & Bratcheer, Loving, J. C. Edwards, 60, 9, S. Tynes sur, 300 ft n of No. 5. Wise, Jackson & Devonian Oil Co., Sapulpa, Okla., L. A. Snider, 40, 1, R. Wilson sur, 150 ft from w and 450 ft from s line. Ryan & Stastny, Graham, G. P. Stewart, 116, 1, S Tynes sur, 150 ft from n and 1500 ft from w line. Shinola Oil Co., Graham, H. F. Haygood, 40, 2, 1466, TE&L sur, 450 ft from e and 150 ft from s line. L. G. Bradstreet Co., Wichita Falls, O. W. Matthews, 40, 2B, A. Rohus sur, 150 ft from s and w lines. Bridwell Oil Co., Wichita Falls, H. O. Prideaux, 40, 1, S 1, C. T. Ry. sur, 150 ft from n and e lines of Sec. 1. Republic Prod. Co., Dallas, H. F. Haywood, 100, 3, 1468, TE&L sur, 850 ft from e and 450 ft from s line of sec. J. D. Carpenter, Olney, W. H. Barrett, 56, 1, E. W. Sargent sur, 150 ft from n and 450 ft from w line. Kleiner, West & H-Y Oil Co., Cisco, C. W. Langston, 125, 28, 1490 TE&L sur, 1050 ft from n and 750 ft from e line.

ZAVALLA COUNTY—Cribbs, Mayhew, Angluit & Pulliam, Laredo, C. & M. Prod. Co., 160, 1, S 9, B ZL&W Co. sur, 580 ft from n and 320 ft from e line nw¼ of sw¼.

ARKANSAS

UNION COUNTY—Alice Sydney Oil Co., El Dorado, Ark., H. M. Nash 1, nw cor sw se, 7-17-13.



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MALONEY

9 Companies Contribute For Drilling Wildcat Test

Tulsa.—Nine companies have joined to drill a wildcat test on the Sam C. Welfelt farm, in the NW Section 28-8-4e. It is to be drilled by the Phillips Petroleum Company and will go to the Wilcox sand. A block of 600 acres surrounds the location.

Companies interested in the new test are: Phillips Petroleum Company, Empire Gas & Fuel Company, Carter Oil Company, Twin State Oil Company, W. B. Pine, Barnsdall Oil Corporation, Gypsy Oil Company, McMan Oil & Gas Company and Marland Production Company.

WILDCATS FROM ALL SECTIONS

OKLAHOMA

GRANT COUNTY—T 28n, R3w, Sec. 24, Consolidated Gas Ut. Co. et al's Conneil 1, nw, hfw 4435 ft, dr 4673 ft.

WOODS COUNTY—T 27n, R 16w, Sec. 33, Sinclair's Share 1, c ne sw, sd 2972 ft.

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros.s' Forbes 1, ne se nw nw, sd 310 ft.

KAY COUNTY—T 26n, R 2e, Sec. 32, J. A. Vincent & Nat's Union's McNeal 1, nwc ne, sd 2795 ft.

HARPER COUNTY—T 25n, R 22w, Sec. 14, Hoffer Oil Co.'s Cooper 1, nwc se, sd 4182 ft; litigation.

WOODS COUNTY—T 25n, R 15w, Sec. 10, Bu Vi Bar et al's 1, sec sw, show gas 5003-19 ft, hfw 5005-19 ft, dr 5373 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden's Vollmer 2, nec se ne sw, lost tools, sd 5640 ft.

WOODWARD COUNTY—T 24n, R 17w, Sec. 32, Otstot Dev. Co.'s Simmons 1, se c, sd 1500 ft.

WOODS COUNTY—T 25n, R 15w, Sec. 10, Miller et al's Copenhaver 1, nwc, sp and sd.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, Washoma Oil Co.'s Acre 1, swc ne, rig.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer's White 1, sec nw, hfw 4730-4800 ft, dr 4845 ft.

WOODWARD COUNTY—T 23n, R 20w, Sec. 9, Billy Oil Co.'s Wyatt 1, c se, 8-in, 3252 ft, sd 3960 ft. T 23n, R 17w, Sec. 2, John Farran's Belva 2, csl sw se, sd 1387 ft.

MAJOR COUNTY—T 23n, R 16w, Sec. 4, Wilson et al's Creech 1, nec sw, sd 510 ft.

WOODWARD COUNTY—T 21n, R 21w, Sec. 25, Sharon's Elmore 1, swc, sd 3025 ft, rig down. T 21n, R 19w, Sec. 15, Burgoyne Bros.' Merklin 1, swc se ne, sd 1910 ft.

MAJOR COUNTY—T 20n, R 14w, Sec. 23, Keller et al's Horton 1, c ne ne, sp and sd.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co.'s Phillips 1, c nw sw, 12-in 1354 ft, sd.

DEWEY COUNTY—T 18n, R 15w, Sec. 9, Huckelby & McCoy's Perfect 1, nec, sd 4500 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healy & Consolidated Drlg. Co.'s Quier 1, sec sw, sd 3970 ft.

KINGFISHER COUNTY — T 16n, R 6w, Sec. 27, Crawford & McKenna's Sturgeon 1, nec sw, sd 4895 ft.

CANADIAN COUNTY—T 14n, R 6w, Sec. 9, A. D. Spears' Piatt 1, swc nw, sd 3223 ft.

CIMARRON COUNTY—T 5n, R 5 E. C. M., Sec. 22, Magnolia's School land 1, c se ne, cmt 8-in cas 2944 ft.

TEXAS COUNTY—T 1n. R 15 E. C. M., Sec. 25, Skaer et al's Hitch 1, nwc, dr 250 ft.

OSAGE COUNTY—T 26n, R 7e, Wrightsman Pet. Co.'s 1, sec nw, dr 1225 ft. T 26n, R 9e, Sec. 20, Wrightsman Pet. Co.'s 1, nwc ne nw nw, dr and abn at 2371 ft.

CREEK COUNTY—T 19n, R 8e, Sec. 35, Murphy Oil Co.'s Lapham 1, swc ne sw, Bartlesville sand 2506-2720 ft water, dr 2795 ft.

LINCOLN COUNTY—T 16n, R 4e, Sec. 15, J. V. Bailey et al's House 1, c ne se, dr 4535 ft. Sec. 19, T. P. C. & O. Co.'s Seabo 1, nwc, sand 4533-38 ft, run 5-in cas. T 16n, R 6e, Sec. 19, Flynn & Morgan's Finely 1, swc, dr 1830 ft. T 14n, R 6e, Sec. 33, Magnolia Pet. Co.'s Mitchell 1, nec, dr 3145 ft. T 12n, R 3e, Sec. 29, Phillips Pet. Co.'s Roberson 1, sec nw, rig.

OKFUSKEE COUNTY—T 12n, R 7e, Sec. 29, Barnsdall's Soweka 1, nec sw, Wilcox 4843-55 ft water, p b to 3933-50 ft.

McINTOSH COUNTY—T 12n, R 18e, Sec. 15, A. B. Wolfe et al's Beck 1, nwc se, sp and sd.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al's McDuff 1, swc nw se, 3M gas 1325-90 ft, 2M gas 1890-95 ft, 3M ft gas 4472-4525 ft, 3M gas 4613-35 ft, Wilcox 5443 to 5496 ft, small show oil 5446-70 ft, 1M gas at 5464 ft and 5480 ft, sand 5556-58 ft, dr.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co.'s Sanders 1, nwc ne sw, sd 2692 ft.

LATIMER COUNTY—T 5n, R 18e, Sec. 15, Limestone O. & G. Co.'s Murray 1, swc, 1½M gas 2518-30 ft, sd 3950 ft show gas.

OKLAHOMA COUNTY—T 12n, R 2w, Sec. 30, Magnolia's Noble 1, nwc sw sw, dr 6475 ft. T 12n, R 1w, Sec. 19, Mid-Kansas & Ramsey's Trosper 1, nec nw, dr 4462 ft.

OKFUSKEE COUNTY—T 11n, R 7e, Sec. 6, Superior et al's Carolina 1, sec, lcn.

SEMINOLE COUNTY—T 10n, R 7e, Sec. 20, Gypsy's Harjo 1, nwc ne ne, dr 3110 ft.

POTTAWATOMIE COUNTY—T 8n, R 5e, Sec. 33, Phillips & Furhman's Raper 1, swc se, dr 2850 ft.

SEMINOLE COUNTY—T 8n, R 7e, Sec. 4, Magnolia Pet. Co.'s Reed 1, nec sw, bailing at 3347 ft.

HUGHES COUNTY—T 8n, R 11e, Sec. 25, McGee Bros.' Smith 1, sec sw, dr 2250 ft.

CLEVELAND COUNTY—T 7n, R 1w, Sec. 15, Sooner Oil Co.'s Vandeveer 1, nec nw sw, sd 3120 ft.

SEMINOLE COUNTY—T 6n, R 5e, Sec. 11, McCulloch's Powell 1, nwc, dr 4305 ft. T 6n, R 7e, Sec. 9, Gypsy Oil Co.'s Thomas 1, sec nw, dr 3880 ft. Sec. 34, Magnolia's Harjo 1, nec se, dr 4679 ft, 2400 ft water in hole.

HUGHES COUNTY—T 6n, R 8e, Sec. 5, Shell et al's Tiger 1, sec ne, Wilcox 4541-54 ft, hfw dry and abn.

SEMINOLE COUNTY—T 6n, R 8e, Sec. 9, The Texas Co.'s Bryant 1, sec ne sw, dr 3274 ft. T 5n, R 7e, Sec. 3, I. T. I. O. et al's Factor 1, swc ne se, dr 3935 ft.

HUGHES COUNTY—T 5n, R 9e, Sec. 17, E. W. Whitney's Huddleston 1, sec sw, ur 5-in 3910 ft.

PONTOTOC COUNTY—T 4n, R 8e, Sec. 23, Independent's Hampton 1, nec, ur 8-in 2805 ft.

PITTSBURG COUNTY—T 4n, R 12e, Sec. 32, Kerr & Key's Tall 1, c nw nw, fsh 1805 ft.

COAL COUNTY—T 2n, R 8e, Sec. 6, J. S. Cosden's Richardson 1, nwc ne ne, 1855 ft, fsh 12-in. Sec. 7, McGinley & Sigler's Wiltsey 1, nwc se se, rig. Sec. 10, E. W. Whitney's Miller 1, sec ne, sd 202 ft. T 1n, R 11e, Sec. 10, I. T. I. O.'s Cook 1-a, sec sw nw, dr 7300 ft.

CUSTER COUNTY—T 14n, R 14w, Sec. 1, W. E. Witt's Wellman 1, c se, sd 100 ft.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Bucy & Stone's Williams 1, c sw, lcn. T 11n, R 26w, Sec. 4, L. C. Hivick's Davis 1, c nnw ne, sd 700 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey's Robinson 1, c ne nw, sd 150 ft.

BECKHAM COUNTY—T 8n, R 25w, Sec. 30, Benedum-Trees Oil Co.'s Rogers 1, swc, gas and water at 2340 ft, re-cmt 6-in cas. T 8n, R 22w, Sec. 20, Carson et al's Denby 1, swc se ne, fsh 1502 ft.

GREER COUNTY—T 6n, R 24w, Sec. 17, I. T. I. O. et al's Fee 1, c ne, sd 1705 ft.

CADDO COUNTY—T 6n, R 10w, Sec. 25, English Drlg. Co.'s Gardner 1, nwc sw sd 3465 ft.

HARMON COUNTY—T 4n, R 26w, Sec. 8, S. M. Stauffer's Castleman 1, nwc se, dr 60 ft.

STEPHENS COUNTY—T 2n, R 8w, Sec. 27, Smythe et al's Shaw 1, c ne ne, dr 1300 ft.

JACKSON COUNTY—T 1n, R 20w, Sec. 4, et al, Northington 1, nec sd 2020 ft.

TILLMAN COUNTY—T 1n, R 17w, Sec. 13, Allen Bros.' Howell 1, nwc se, show oil 599 ft, sd 826 ft. T 1s, R 18w, Sec. 25, Wirt Franklin's Zweig 1, c nw, dr 3114 ft.

COTTON COUNTY—T 1s, R 11w, Sec. 24, Bridwell et al's Crow 1, sec sw sw, sd 1626 ft.

STEPHENS COUNTY—T 3s, R 7w, Sec. 4, Ellis Drlg. Co.'s Yates 1, swc ne, dr 1836 ft. T 3s, R 6w, Sec. 4, Carter et al's Woolsey 1, sec sw ne, lcn.

COTTON COUNTY—T 4s, R 9w, Sec. 31, Amerada Pet. Corp.'s De Lana 1, sec nw nw, dr 2061 ft.

JEFFERSON COUNTY—T 5s, R 8w, Sec. 16, Pearce & Brown's School 1, sec ne nw, dr 2700 ft. T 5s, R 7w, Sec. 35, Amerada Pet. et al's Majors 1, sec nnw nw, lcn.

GARVIN COUNTY—T 3n, R 3w, Sec. 36, Gilcrease-Douglas Oil Co.'s Barnett 1, sec nw ne, dr 4525 ft.

MURRAY COUNTY—T 1n, R 2e, Sec. 17, Revels & McGee's Wolfe 1, nwc, sd 2275 ft.

JOHNSON COUNTY—T 1s, R 7e, Sec. 29, Smith-Kinsley's Lane 1, sec nw, sd 2090 ft.

CARTER COUNTY—T 4s, R 1e, Sec. 32, Leonard Woodruff's Zellner 1, nwc sw ne, dr 520 ft. T 4s, R 2e, Sec. 32, Tex-Okla Drlg. Co.'s Anderson 1, sec ne ne, sd 420 ft.

BRYAN COUNTY—T 9s, R 9e, Sec. 36, W. G. Endicott et al's Craige 1, c nw ne, sd 1390 ft.

CLEVELAND COUNTY—T 10n, R 2w, Sec. 8, Phillips, Prairie & Slick's Sudik 1, c ne ne, dr 6112 ft.

WOODWARD COUNTY—T 23n, R 17w, Sec. 23, Transcontinental & Prairie's Wilbur 1, nec, dr 4250 ft.

OKFUSKEE COUNTY—T 11n, R 9e, Sec. 2, Producers & Refiners' Palmer 1, nwc ne, dr 4028 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

NORTH LOUISIANA

Completions

Company, Well and Location		Initial Production Bbls.	Depth
BOSSIER PARISH—			
Magnolia Pet. Co., B. M. Cook 1, 2-22-11	sw		3215
CADDO PARISH—			
Standard Oil Co. of La., Hunter 4, 17-19-14	*		2616
GRANT PARISH—			
Carter & Collins, Ball Lbr. Co. 1, 29-7-1w	*		2410
SABINE PARISH—			
W. J. Garnier, Bowman-Hicks 1, 12-7-12	*		625

BIENVILLE PARISH—W. G. Gray, Tr.'s Snyder 1, 15-16-6w, topped Nacatosh 2100 ft, r 2151 ft.

BOSSIER PARISH—Nell & Lanier's Biedenharn 1, 23-21-14, sd 790 ft. Walker et al's Antrim 1, 28-22-13, sd wo 3017 ft, td 3048 ft. John F. Woodman's Bolinger 1, 9-22-11, sd 3532 ft. Magnolia Pet. Co.'s B. M. Cook 1, 2-22-11, sw abn td 3215 ft. Triangle Drlg. Co.'s J. H. Fullilove 1, 11-17-12, cemtd 6-in cas 1700 ft. Deleware La. Dev. Co.'s Bolinger 4, 38-23-11, dr red gmbo 3808 ft.

CADDO PARISH—D. C. R. Oil Co.'s Oden 1, 20-19-14, dk. Lide & Davidson's Oden 1, 21-19-14, dk pat. Walter Ray et al's Hunter 1, 8-19-14, dk pat. Palmer Corp.'s Hunter Est. 1, 8-19-14, lcn. Hunter Est. 2, 8-19-14, lcn. Sam Gold et al's Henderson 1, 17-19-14, dr 1350 ft. Ohio Oil Co.'s Hunter Est. 1, 17-19-14, cemtd 6⅝-in cas 2375 ft, td 2405 ft. Hunter Est. 2, 17-19-14, rig up. Hunter Est. 3, 17-19-14, lcn. Hunter Est. 4, 17-19-14, lcn. Standard Oil Co. of La.'s Henderson 1, 7-19-14, dk. Hunter Est. 2, 8-19-14, sd 2100 ft oil in hole, flowed 7 bbls std. Hunter Est. 3, 17-19-14, lcn. Hunter Est. 4, 17-19-14, dry abn td 2616 ft. Hunter

Est. 5, 17-19-14, lcn. Gulf Ref. Co.'s Pope Oden 2, 18-19-14, made 58 bbls in 12 hours on beam, td 2423 ft. Pope Oden 3, 18-19-14, dk. Pope Oden 4, 18-19-14, dk pat.

CLAIBORNE PARISH—Smitherman & McDonald's Miller 1, 17-23-8, temp abn td 4780 ft. El Dorado Chief Oil Co.'s Dance 1, 27-20-7, dk.

CATAHOULA PARISH—Lochnager O. & G. Co.'s Taliaferro 1, 26-9-6e, sd 900 ft.

DE SOTO PARISH—L. M. Moffitt's Boatright 1, 3-10-13, tested 10,000 ft gas sd 3078 ft. P. J. Becker's Tull 2, 23-12-15, sd td 1386 ft. Carlton Drlg. Co.'s Stephens 2, 12-11-16, sd 2046 ft. Longstreet Synd's Ramsey 1, 33-13-16, changing to heavy rig, td 2802 ft. Benedum & Trees' States 2, 22-14-12, dr 2590 ft.

FRANKLIN PARISH—Ruston Drlg. Co.'s West Va. Lbr. Co. 1, 23-15-7e, dr black shale 3312 ft. Davis et al's Moore 1, 12-11-6e, sd 1430 ft.

GRANT PARISH—Carter & Collins' Ball Lbr. Co. 1, 29-7-1w, dry abn td 2410 ft.

JACKSON PARISH—Geo. O. Baird's Tremont Lbr. Co. 1, 24-17-1w, dr black shale 2461 ft.

LA SALLE PARISH—Tunica Pet. Co.'s L. & A. 47, 17-7-2e, bldg dk.

LINCOLN PARISH—V. E. Shaw's Voss 1, 1-20-3w, sd 2740 ft.

MOREHOUSE PARISH — Rainbow Oil Co.'s Louisville Cooperage 1, 33-22-8e, dk.

NATCHITOCHES PARISH — S. D. McDaniels' Clarke-Morse Lbr. Co. 2, 23-5-6w, sd 2536 ft. Robeline O. & G. Co..'s Cassaday 1, 7-8-9w, show of gas ds, stuck td 3230 ft.

OUACHITA PARISH—Ouachita Nat. Gas Co.'s D'Arbonne B-2, 25-19-2e, sd 3349 ft. Phillips et al's School Fee 1, 16-16-4e, dr 3750 ft.

RAPIDES PARISH — G. E. Silbertson's Willemach 3, 13-5n-4w, sd 2250 ft. Glenmora Pet. Co.'s Fee 1, 1-2n-2w, sd 3850 ft.

RICHLAND PARISH—Austin & McDonald's Millsapps 1, 17-17-6e, dr 2190 ft. Millsaps 2, 17-17-6e, tested 20 fourbles sw through ds, sd 2697 ft. Millsaps 3, 16-17-6e, lcn. Millsaps 4, 16-17-6e, lcn. S. R. Humble's Binion-Sartor 1, 22-17-6e, lcn. Etheridge 1, 28-17-16e, cemtd 6-in cas 2291 ft. Hope Prod. Co.'s Eubanks 1, 26-17-6e, dr 606 ft. North La. Gas Co.'s Humble 1, 20-17-6e, fsh ds 2210 ft. Palmer Corp.'s Hardwick 1, 16-17-6e, dr 465 ft. Jones 1, 22-17-6e, rig up. Miles 1, 11-17-6e, bailing to test, td 2428 ft. Rhymes 1, 21-17-6e, rig up. Whitten 1, 21-17-6, rig up.

SABINE PARISH—W. J. Garnier's Bowman-Hicks 1, 12-7-12, dry abn, no cas set, td 625 ft. R. L. Gay, Tr.'s Bowman-Hicks 4, 4-7-14, dk. Sabine Lbr. Co. 2, 23-7-14, dr 120 ft. Long-Bell Lbr. Co. 1, 26-8-14, dr 1625 ft. A. H. Tarver's Long Bell Lbr. Co. 1, 29-8-13, tested 100,000 cu ft gas through ds 3429 ft, coring 3431 ft.

UNION PARISH—Texas Co.'s F. M. Fuller 1, 9-21-2w, dr hard lime 2407 ft. Sundby et al's Security Trust 1, 6-23-1e, sd 2300 ft. G. E. Carmatte's Tugwell 2, 21-22-1e, trying mud off sw 1845 ft. Carter & Wingfield's Clark A-3, 8-23-1e, dk. H. C. McDonald's Union Sawmill 2, 8-23-1e, sd 1500 ft.

WEBSTER PARISH—W. M. Kemp et al's Campbell 1, 11-22-10, lcn. P. Hudson's Slack 1, 1-22-11, sd repr rig 2465 ft. Nemour's Corp.'s Munn 2, 1-22-10, tested 4 mil ft gas, wo 2633 ft. Magnolia Pet. Co.'s Atkins 1, 4-22-9, 1000 ft oil in hole to std, td 2665 ft. John F. Woodman's Boyd 1, 3-22-11, dk. Magnolia Pet. Co.'s Denman 1, 1-22-11, cemtd bottom hole, td 2719 ft. Sallie Coyle 1, 2-22-11, dk. McCook & Hibbler 1, 22-21-10, dr lime, strks shale 5994 ft.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BRADLEY COUNTY—		
Phillips Pet. Co. et al, J. W. Kline 1, 28-16-12	*	2902
OUACHITA COUNTY—		
Ark. Drilling Co., Crowley 1, 27-15-18	*	3220

ASHLEY COUNTY—Atlantic O. P. Co.'s Bledsoe 1, 20-15-7, sd for water 3058 ft.

BRADLEY COUNTY—Phillips Pet. Co. et al's J. W. Kline 1, 28-16-12, topped red beds 2860 ft, dry abn in red beds 2902 ft.

CALHOUN COUNTY—Phillips Pet. Co. et al's Eagle Mills Lbr. Co. 1, 11-16-12, dk pat.

COLUMBIA COUNTY—G. W. Dayley et al's Fullenwider & Kitchen 1, 12-17-22, sd, wo 2847 ft. Helena O. & G. Co.'s Pickler 1, 19-19-22, sd 2647 ft. Dr. Bush et al's Jones 1, 5-17-18, dr 2005 ft. T. R. Brown et al's Spencer 1, 18-18-22, rig up. Jacob Laskin et al's Dennis 1, 11-20-23, dr 1600 ft.

CRAWFORD COUNTY—Industrial O. & G. Co.'s Brownlee 2, 22-9-31, lcn.

DREW COUNTY—McClintock & Goedke's Ogle 1, 35-13-5, trying to clean, td 2530 ft.

FAULKNER COUNTY—Gold Creek O. & G. Co.'s Stermer 1, 17-4-13, temp abn, td 3462 ft.

FRANKLIN COUNTY—Ozark Nat. Gas Co.'s McElroy 1, 15-8-27, lcn.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-3-19w, sw 3009 ft. Chaywood Oil Co.'s Malvern Lbr. Co. 1, 17-2-17, sd, wo 1668 ft.

GRANT COUNTY—Jones & Watkins' Meek 1, 5-4-11, sd 1400 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 21-12-13w, sd 2941 ft.

LOGAN COUNTY—Ark.-La. Pipe Line Co.'s Hanna 1, 26-7-23, cleaning out, td 2285 ft.

OUACHITA COUNTY—Lohman & LeGrand's Fogle 1, 18-14-16, digging water well, rig up. Flaucher et al's Buck's 1, 7-15-17, sd, wo 2475 ft. Timberlake et al's Wright 1, 25-14-18, repr rig 2855 ft. Ark. Drilling Co.'s Crowley 1, 27-15-18, dry abn, no cas set, td 3220 ft. McDonald Bros.' Wilson A-2, 25-15-18, cemtd 12½-in cas 160 ft, dr 2450 ft. Chas. McDonald's Wilson B-3, 25-15-18, cemtd 10-in cas 67 ft, dr 1415 ft. Sundby et al's Farris 1, 27-15-15, dk pat.

ST. FRANCIS COUNTY—W. F. Harris' Halbert 1, 32-4-4, lcn.

UNION COUNTY — Johnson-Gummer Oil Co.'s Cargile 1, 4-18-13, cemtd 10-in cas 154 ft, dr 250 ft. Wesson et al's Booth 1, 12-15-19, sd 2227 ft. Foster et al's Murphy Land Co. 1, 22-17-17, sd 1400 ft. J. P. Hawkins et al's Goodwin 1, 36-17-16, dk. W. M. Coates, Tr.'s McDuffie 1, 32-19-16, tested dry through ds 3288-96 ft, dr 3362 ft. Gulf Ref. Co.'s Gaddy 2, 30-17-14, sr 3650 ft. S. Arrendale's Gallagher & Nelson 1, 18-18-17, drk. John Stark et al's Ainsworth 1, 8-19-16, dk pat.

EAST TEXAS

BOWIE COUNTY—Hooks O. & G. Co.'s Rosenberg 1, King sur, temp abn, td 3086 ft.

CAMP COUNTY—Rogers et al's Enfelt 1, Montgomery sur, sd 1920 ft.

HARRISON COUNTY—McRitchie et al's Dean 1, Craft sur, sd, wo 2165 ft.

RED RIVER COUNTY—D. M. Buffington's Hoosier 1, Hughart sur, sd, wo 1863 ft. Shad Harper's Garland 1, Jos. Wagley sur, arr resume dr 1862 ft. Johnson Pet. Co.'s Randolph 2, Dean sur, sd, wo 1440 ft.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd 3004 ft. Gulf Ref. Co.'s Caraway 1, Patterson sur, dr gray lime and shells 5008 ft.

MISSISSIPPI

ALCORN COUNTY—Alcorn Pet. Co.'s Matthews 1, 14-7-2, sd.

CHICKASAW COUNTY—Hightower & Golson's Flemming 1, 20-13-13, arr resume dr with cable tools 1100 ft.

CLAIBORNE COUNTY—Ben White's Old Hen 1, 36-10-4, fsh cas, td 1970 ft.

HINDS COUNTY—Mrs. Ella Rawls Reeder's State Land 1, 25-6-1, sd 2825 ft. Hennessey et al's Riverside 1, 23-16-5, arr resume dr 1050 ft.

LEE COUNTY—Lee County Pet. Co.'s Hickman 1, 12-8-6, sd 920 ft.

LINCOLN COUNTY (Brookhaven)—Miss. Land & Oil Co.'s Pat Case 1, 21-8-6, sd 30 ft.

LAUDERDALE COUNTY (Meridian)—Meridian Nat. Gas Co.'s Mattie Houser 1, 33-8-18, sd in sand 1668 ft. Lauderdale O. & G. Co.'s Lackey 1, 2-7-16, rig up. J. R. Smith Oil Co.'s Craig 1, 2-6-14, dk.

MONROE COUNTY— (Armory District)—Armory Pet. Co.'s Hall 1, 8-13-17, fsh job completed, arr resume dr 3045 ft. Armory Dev. Co.'s Bourland 1, 2-13-19, fsh tools, td 2500 ft. Armory Nat. Gas Co.'s Carter 1, 17-13-17, dr slate 2400 ft. Ark. Nat. Gas Corp.'s Rye 1, 22-15-17, fsh job completed, arr recemt 5 3/16-in cas 3376 ft. Park Bowser et al's Cowart 1, 2-12-19, arr resume with drive pipe.

WARREN COUNTY (Vicksburg District)—Henderson et al's Dornbusch 1, 8-18-5, dr 106 ft.

YALABOUSHA COUNTY (Water Valley District)—Philp Bros.' James 1, 20-11-5w, dr hard rock, occasional breaks showing gas 2650 ft.

ALABAMA

LAMAR COUNTY—Briggs & Knapp's, Wefel 1, 25-12-14, hauling in 8-in cas to set, td 573 ft.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, dr 610 ft. Hobson Bros.' 1, 9-8-2, dr 550 ft.

CHOCTAW COUNTY — Robinson-Greer's Long-Bell Lbr. Co. 1, 28-10-4, arr to abn in sand and shale, td 4020 ft. Gulf Ref. Co.'s Thornton 1, lcn.

TENNESSEE

DECATUR COUNTY—Standard Oil Co. of La.'s Wyatt 1, dr 1260 ft. Chester County O. & G. Co.'s Montgomery 1, sd 1040 ft.

NEW MEXICO

CHAVES—R. T. Neal et al's Russell 1, 31-14-25e, sd 1385 ft. Warman et al, 1, sw, 23-13-24, sd. Tannehill et al's Butler 1, se, 15-21-24, sd 1067 ft. Transcontinental's Robbings 1, 1-14s-28e, dr 3000 ft.

DE BACA—Matador Oil Co.'s State 1, sw, 6-4n-20e, dr 2130 ft. Pittsburg Oil Co., 1, ne, 16-1s-27e, sd 4506 ft. Transcontinental's McWhorter 1, 6-35-22e, dr 4220 ft in lime.

GUADALUPE—Hanchett Oil Co., 2, 14-8n-24e, fsh tools 2403 ft.

LEA—Midwest's Lane 31, sw 28-19-30, cemt 12½-in at 1352 ft. Midwest's Capps 31, sw, 3-19-38, run 10-in at 2730 ft. Midwest's Farnsworth 19, sw 12-26-37, sd 4115 ft. Midwest's Gregory 22, sw, 31-25-37, run 10-in at 2714 ft. Gypsy Oil Co.'s Mattern 1, 24-21-36, dr 3620 ft. Gypsy's Humphreys 1, sw, 25-25-36, dr 1610 ft. Exploration Co.'s Record 1, 26-19-35, td 4556 ft. Morton et al's State 1, ne, 32-11-38, fsh 1880 ft. Texas' Sheppard 1, ne, 6-26s-37e, sdtr tools. Texas' Moberly 1, se, 17-26-37, co 3542 ft. Texas' Humphreys 1, sw, 18-20-32, dr 2000 ft. Cranfill & Reynolds' Meyer 1, sw, 22-24-36, dr 1010 ft. Pueblo Oil Co.'s Scott 1, se, 29-25s-37e, se, 8-21-35, dr 1865 ft. Empire Gas & Fuel Co.'s Closson 1, se, 6-22-36, dr 1350 ft. Texas Pacific Coal & Oil's State 1, sw, 22-23-35, plug back to 3830 ft. Henderson et al's McDonald 1, se, 19-20-34, plugged back to 3594 ft from 3613 ft. Vacuum Oil Co., 1, 14-17-34, dr 4681 ft. Bordages et al's Hughes 1, 27-19-38, cas trouble 4012 ft, 300 ft oil in hole. Pueblo Oil Co.'s Scott 1, se, 29-25-37, dr 3120 ft. Pueblo Oil Co.'s Lee 1, ne, 34-17-29, dr 875 ft. Ohio Oil Co.'s Price 1, 7-19-39, rigged. Ohio Oil Co.'s State 1, 9-13-38, rig. Empire-Henderson et al's Martin 1, ne, 28-20s-33e, dr 1512 ft. Buell & Hagen, State 1, ne, 13-11s-35e, dr 1450 ft. Marland's Flint 1, se, 28-20s-34e, dr 1015 ft. Shell Pet. Corp.'s Terry 1, ne, 22-19s-38e, dr 500 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-19-9, dr 1830 ft. San Juan Coal & Oil Co., 1, se 27-18n-9w, dr 1800 ft.

ROOSEVELT—J. T. Keegan et al's Pepper 1, 6-1s-36e, ready to spd. Smith & Sloan's Lovern 1, se, 4-3s-35, dr 1821 ft.

RIO ARRIBA—Berringer et al's Hartman 1, ne, 8-29-7, sd 577 ft.

SAN JUAN—Continental Oil Co.'s Munoz 17, 2-29-19, rerun tubing and packer 6774 ft. Dorothy Oil Co., 29-30-9, wtg cas 635 ft. Kutz Canon O. & G. Co.'s Day 1, 20-28-10, hfw 731 ft. Blackrock Oil Co., 1, sw, 11-25-13, sd 1550 ft. Iowa Oil Synd.'s Viles 1, 28-29-11, sd 694 ft. Angel Peak Oil Co.'s Kutz Canon 1, 11-28n-11w, rebldg rig, 3100 ft. Great Mesa Oil Corp.'s Roderick 1, sw, 11-22-14, dr 610 ft. Milwaukee-N. M. Synd.'s Beardsley 1, 30-38-11, sd 1890 ft, may abn. Childers D. & P. Co.'s Westwater 2, nw, 24-31-18, water trouble 2525 ft. Reserve Oil Co.'s Shaffer 2, ne, 1-21-14, dr 725 ft.

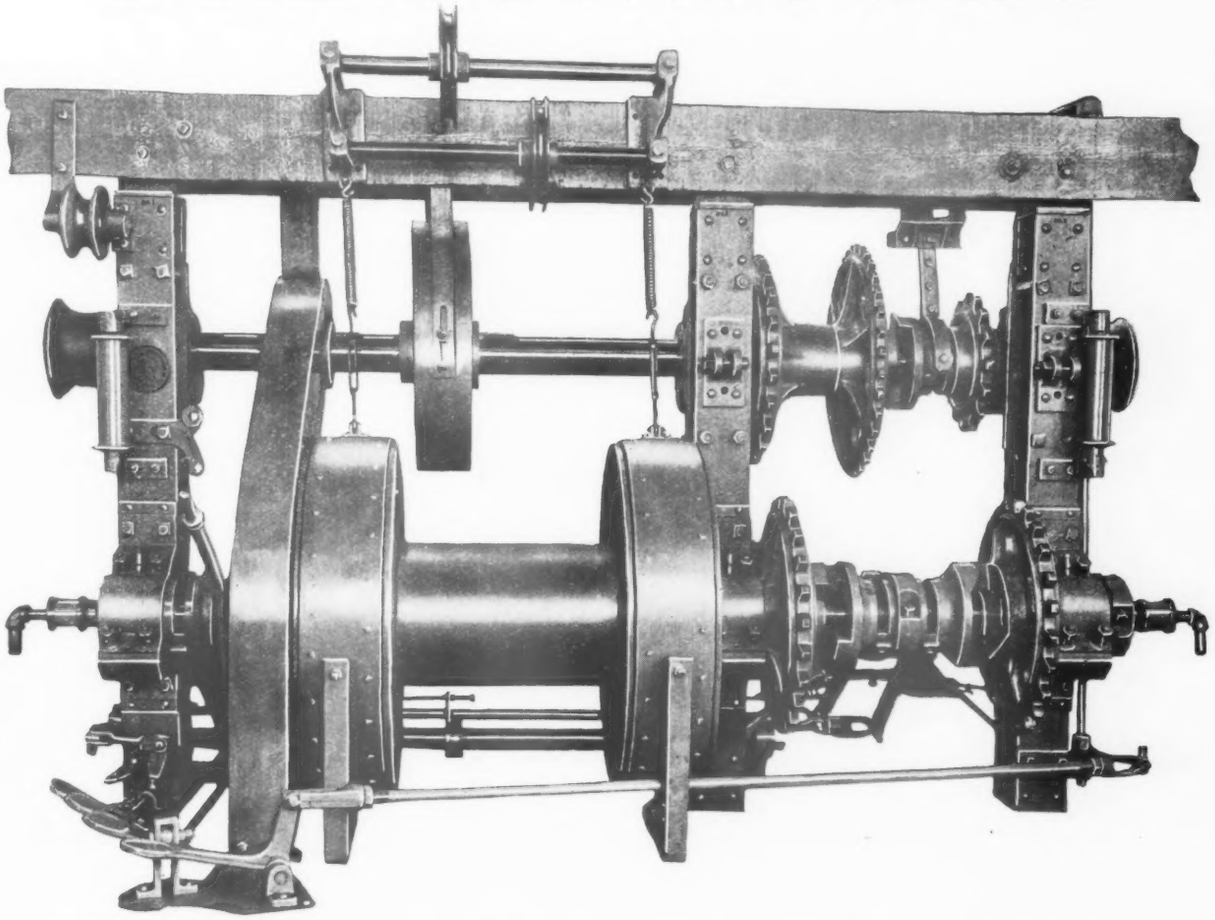
SAN MIGUEL—Benedict-Wilson 1, ne, 25-17-16, sd 800 ft. Pioneer O. & G. Co.'s Thunderbird 1, nw, 14-15-16, cemt 1875 ft. Starr Oil Co.'s Adams 1, ne, 25-17-16, td 660 ft.

SOROCCO—Arnold et al., 2, ne 13-6-1, sd 1975 ft.

TORRANCE—Bluhall O. & G. Co., 20-6-10,

XUM

DREADNAUGHT



NEW DEPTH RECORD SET AT EVANGELINE

HOUSTON.—Yount-Lee Oil Company has established a new record for the Gulf Coast in deep production, having completed Houssiere 6 at Evangeline, Louisiana, on June 3 for 5000 barrels initial production at 7292 feet. The well is on a one-quarter-inch and a three-sixteenths-inch choke, and is producing crude which tests 30 gravity, corrected.

Aside from being the deepest producer of the Gulf Coast, the new Yount-Lee Oil Company well in Louisiana is also the deepest test that has ever been drilled in the Coastal country. Former record holders for depth included Humble Oil & Refining Company's Simms-Smith 74 at Goose Creek, abandoned in February, 1929, at 6967 feet, and Yount-Lee Oil Company's Gladys 6 at Spindle Top, abandoned at 6765 feet.

FROM OIL WEEKLY, JUNE 7th, 1929

DREADNAUGHTS **ASSISTED IN MAKING THESE RECORDS. WE RECOGNIZE THE ABILITIES OF THE CREWS WHO MADE THEM. FOR THEIR OPINION OF** DREADNAUGHTS,

Ask the Men Who Run Them

BEAUMONT IRON WORKS CO.

BUILDERS OF DREADNAUGHTS

BEAUMONT, TEXAS

sd 1800 ft. Sinnock et al's Kutchin 1, ne, 13-7-7, td 197 ft, crooked hole.

VALENCIA—Rio Puerco Oil Co.,'s N. M.-Ariz. Land Co. 2, nw, 13-6-2, wait pipe 3145 ft. Acme Oil Co.'s N. M.-Ariz. Land Co. 1, 26-6-3, sd cemt 3670 ft

MONTANA

BROADWATER—Swoboda et al's 1, 36-7n-2e, dr. Signal Hill O. & G. Co., nw 7-3n-1e, dr 1925 ft.

CARBON—Ohio Oil Co.'s Northern Pacific 2, 11-7s-21e, dr 1270 ft.

CASCADE—U. S. Pet. Co.'s Miller 1, 8-21-4w, 8-21-4w, ready to test, show at 1100 ft.

CHOTEAU—California Synd.'s Walker 1, ne, 18-23-6e, dr below 250 ft.

GALLATIN—California Co.'s Ringling 1, 35-5n-7e, dr 1024 ft.

HILL—A. H. Perkins' Brown's Coulee 1, nw, 32-34-14e, rig.

LIBERTY SUNBURST—Sunburst O. & R. Co.'s Bear's Den 1, nw, 17-36-6e, dr 2300 ft. Square Deal Pet. Co.'s Johnson 1, se 1-32-7e, fsh 3365 ft. Western Natural Gas Co.'s Morrison 1, 5-37-4e, dr 2000 ft.

LAKE—Missoula-Flathead Oil Pools Co.'s nw, 31-21-20, resumed operations.

PHILLIPS—Big Dome O. & G. Co.'s Bloomberg 1, ne, 1-32n-32e, dr 2325 ft.

PONDERA—Miller Bros.' Bruins 1,. nw, 17-28-1w, rig up.

SWEETGRASS—Shoshone Consolidated's 1, 23-2n-15e, reported oil 4100 ft.

TETON—Ohio Oil Co.'s Coghill 1, 32-26-2w, abn 1885 ft in sulfur water. Texas Pacific Coal & Oil Co., se¼, 15-25-1w, lcn.

TOOLE—Monalta Oil Co., Ltd., No. 1 Blarney, se¼, 4-37-4w, dr 600 ft.

COLORADO

ARCHULETA—Juanita Oil Co.'s Harvey 1, sw 4-32n-3w, stand 725 ft.

BENT—Marland Oil Co.'s Pipe Springs 1, se 27-29-49, dr 4190 ft.

DOLORES—Transcontinental's Glade 1, nw 30-41-16, resume 4005 ft.

ELBERT—Progressive O. & L. Co.'s Pease 1, sw 27-10-60, spd 70 ft. Belmont Oil Co.'s Mahr 1, sw 4-6s-59w, dr 3435 ft.

JACKSON—Midwest, nw 9-6-80, rigging. P. & R.'s Hendershot 1, 2-6-81, wait cas 1900 ft.

JEFFERSON—Ruby Hill O. & G. Co.'s Braden 1, se 14-4s-69w, cas at 3170 ft.

LAS ANIMAS—Parker Club & Kinney-Coastal, 4-28-68, sd 3016 ft. Kentucky Oxy & Hyd Co. 1, se 35-29-60, completed 1M gasser at 987 ft.

LARIMER—Barrows et al., 7-11s-68w, sd 2000 ft.

LA PLATA—Royal P. & R.'s Red Mesa 1, 27-33-12, ready to resume at 567 ft.

LINCOLN—Kelly Oil Co.'s State 1, ne 36-14-57, resume 1900 ft.

MESA—High Line Oil Synd.'s Hoel 1, ne 23-8s-104, sd 2712 ft. Parrish & Langston, D. & R. G.'s Western 1, nw 23-1-1, sd indef 415 ft.

MOFFATT—McLaughlin et al's Wms 1, 2-3-91, dr 3619 ft. McCormick et al's Sales 1, se 28-4n-92, sd 105 ft for repairs.

MONTROSE—Uncompaghre O. & G. Co.'s Colorado Title & Trust 1, 27-50-10, dr 2020 ft.

PUEBLO—Beulah Dome Oil Co.'s Hedland 1, sw 7-23-67, dr 180 ft. Boone O. & G. Co.'s Ritter 1, nw 33-18-60, dr 3025 ft.

RIO BLANCO—White Eagle, Fordham 1A, sw 9-2-96, dr 560 ft. Texas Prod.'s Potter 1, rigging.

YUMA—Major Pete, Inc.'s Black Wolf 1A, sw 7-2-43, dr 750 ft. Phillips' Andrews 1, nw 3-2-42, dr 800 ft.

WELD—Platte Valley Pete Corp., Patterson 1, sw 23-8n-61w, td 4330 ft, ur.

WYOMING

ALBANY—Midwest Refining Co.'s Diamond Anticline 1, moving in.

BIG HORN—P. & R. Corp.'s Hill 1, 7-57-97, cemt 596 ft. P. & R. Corp.'s Rand 1, 7-57-97, dr 2185 ft. P. & R.'s McKinney 1, 12-57-97, lcn. P. & R. 39, 24-51-93, sd 699 ft. P. & R. 3, 24-56-98, recovered core barrel 2550 ft, td 3060 ft. Ohio Oil Co.'s Easton 1, 36-56-97, dr 1800 ft.

CARBON—P. & R. 2-19-88, to redr 3905 ft, td 4003 ft. C. E. Bivins et al's Haggs 1, 35-13-92, resum at 1005 ft.

FREMONT—P. & R.'s Muskrat 1, 33-34-92, sp. P. & R.'s Muskrat 1, 1-33-92, rigging. Kinney-Coastal, 22-3-1, dr 2525 ft. Texas Prod. Co.'s State 1, 36-34-95, rigging.

HOT SPRINGS—Texas Prod. Co., sw 23-45n-100w, dr 2505 ft. Midwest Refining Co., 8, 6-44-98, bldg rig. C. F. Robertson et al, se, 17-43-92, sp.

LINCOLN—Midwest Ref. Co.'s Waterfall 1, 35-22-115, dr 3365 ft. Midwest Refining Co.'s Grey's River 1, 25-37-117, dr 813 ft.

NATRONA—Prairie O. & G. Co.'s Baird 1, 22-31-81, strmmg 650 ft, td 730 ft.

PARK—P. & R.'s Pitchfork 1, 14-48-102, dr 440 ft. Midwest's Rosenburg 36, nw, 25-58-98, run cas 2730 ft. Rosenburg 1, 25-58-98, lcn. Resolute Oil Co., nw, 17-57-101, resum 2155 ft. Henderson Prod. Co., 31-58-99, second sand dry, will deepen.

SWEETWATER — Mountain Fuel Supply Co.'s Tucker 1, 18-13-99, dr out cemt 2480 ft. Mountain Fuel Supply Co.'s Humphreys 1, 2-12-101, cemt 7⅝-in at 3750 ft. Mountain Fuel Supply Co.'s Otto Arnold 1, 24-19-104, dr 3050 ft. Mountain Fuel Supply Co.'s Newberger 1, 13-12-101, cemt 12½-in cas at 1460 ft. P. & R. Corp., 26-20-104, dr 4035 ft.

SUBLETTE—California Co.'s Wyss 1, 12-32n-115w, ur and co 2130 ft.

UINTA—California Co.'s U. P. 1, 7-17n-119w, fsh bit 3183 ft.

WESTON—Wyo. Drlg. Synd., 15-44-64, successfully sdtr 600 ft corkscrew casing, td 4350 ft.

SOUTHERN CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
REDONDO—		
Petroleum Securities Co.'s Schwuchow 1	*	5755

BELVEDERE—Prairie Oil & Gas Co.'s Hellman 1, 32-1-12, dr shale 1122 ft.

CHATSWORTH — Russell Petroleum Co.'s 2, 23-3-17, 10-inch cas cmt 1490 ft.

CLEARWATER—The Texas Co.'s Montana Land 1, rig.

FULLERTON—Shell Oil Co.'s Bastanchury 1, dr hard sand, 2677 ft.

HAWTHORNE — Standard Oil Co.'s Freeman 1, 5-3-14, dr sandy shale 4900 ft.

MONTEREY PARK—Monterey Park Pet. Co.'s 1, 25-1-12, repairing rig.

NEWHALL—P. B. Anderson's 1, 1-3-16, dr shale 278 ft. Southern California Drilling Co.'s 1, rigged up.

NEWPORT—Mesa Pet. Corp.'s B. A. 1, 16-6-10, dr gray sand 4462 ft.

POMONA—Pomona Oil Assn's 1, 32-1-8, dr hard sand 1140 ft.

PUENTE—R. C. Rucker's G-1, 27-2-10, dr shale 1330 ft.

REDONDO—Allied Pet. Co.'s Lincoln 1, 28-3-14, dr streaks oil sand 5328 ft.

RICHFIELD—Western Drilling & Producing Co.'s 1, 21-3-9, dr shale 4660 ft.

ROSECRANS — Burlingame Pet. Corp.'s Hamm 1, dr 2175 ft.

TELEGRAPH CANYON—Union's Rimpau 1, 13-3-9, rigging rotary.

WHITTIER—R. W. Jackson's Flory 1, 8¼-inch cas cmt 1100 ft, td 2450 ft.

RIVERSIDE COUNTY—L. R. Clark's Banning 1, fsh for dr pipe 2250 ft. Hall Pet. Co.'s Watt 1, 23-7-3, dr hard sand 935 ft. Hemet Pet. Co.'s Ward 1, dr gray sand 3266 ft. Trabuca Oil Co.'s 1, dr hard sand 3830 ft.

SAN BERNARDINO COUNTY — Mahala Oil & Gas Co.'s 1, 13-3-8, sdtr cas 4000 ft. Western Pacific Oil Co.'s 3, 4-10-4, co 3375 ft.

SAN DIEGO COUNTY—S. S. Turner's Baler 1, swabbing water 1970 ft.

NORTHERN CALIFORNIA

	Completion	
SANTA BARBARA COUNTY—		
Olympic Oil & Ref. Co.'s Lomas 1	1000	2250

KERN COUNTY

BAKERSFIELD—Taft Well Drilling Co.'s Delfino 1, dr sand 800 ft.

BELRIDGE—Elkhorn Oil Co.'s 1, 20-28-20, sdtr tools 975 ft, td 1000 ft. Ventura-Pacific Oil Co.'s 1, 18-29-22, rigging up rotary. K. C. Wallace's 1, 32-29-21, dr shale 775 ft.

BENA—Elmer Oil Co.'s 1, 15-30-30, dr shale 2500 ft.

BUTTONWILLOW — Milham Exploration Co.'s Kern 6, 8-28-23, new lcn. Richfield's Redding 1, 36-27-23, dr shale 7000 ft.

GOULD HILLS—Elmer Oil Co.'s 1, 2-29-20, dr brown shale 2860 ft. J. H. Kennedy's 1, 5-29-21, rigging up rotary. Ozena Oil Co.'s Kendon 2, 27-29-21, sp.

KERN RIVER—Gatton & Gould's 1, dr shale 1306 ft. Richfield's Boston 1, 20-28-28, dr hard sand 4465 ft.

LERDO—Shell's An-1, 5-29-27, 11¾-in cas cmt 3725 ft, td 3766 ft.

McFARLAND—General Petroleum's K. C. L. 1, 25-26-25, dr shale 5368 ft.

ROSEDALE—Elmer Oil Co.'s 1, 33-29-26, fsh for dr pipe 2750 ft.

SHALE HILLS—Day Oil Co.'s 1-A, 1-27-18, dr shale 500 ft.

SAN EMIDIO—Union's K. C. L. 2, 5-10-21, dr shale 3434 ft.

TEMBLOR HILLS — George F. Getty's Phelps 1, 29-31-22, dr shale 2525 ft. Union's W. P. 1, 27-32-23, plugged to 2200 ft, 8⅝-inch cas cmt 2110 ft; Union's Williams 1, 22-32-23, dr shale 775 ft.

SANTA BARBARA COUNTY

BETTERAVIA—Fred Garliepp's 1, 20-10-35, lcn. Shell's U. S. 3-A, 36-10-35, sr 1705 ft; U. S. 4-A, coring 1550 ft.

BUELL CANYON — Union's Buell 1, dr brown shale 1533 ft.

CARPENTERIA—Continental's Kitty Bailard 1, dr shale 3318 ft.

GOLETA—F. G. Anderson's Langman 1, dr shale 4317 ft. General Petroleum's More 1, 21-4-28, dr brown shale 3488 ft. Padre Oil Co.'s Dos Pueblos 1, 8-4-29, dr shale and sand 2955 ft. Petroleum Securities' Bishop 1, dr shale 2525 ft.

NAPLES—Pacific Western's Wiley 1, 7-4-29, dr shale 1428 ft.

ORELLA—Shell's Rutherford 1, 36-5-31, sr 4200 ft.

POINT CONCEPCION—Standard's Gerber 1, sd 2430 ft. Western Gulf's Hollister 1, oil sand and shale 3090-3115 ft, will test.

SANTA MARIA—Keystone Oil Co.'s Paderewski 1, 33-10-34, rigging up. System Oil Co.'s Bradley 1, 36-10-34, dr sandy shale 2675 ft.

SUMMERLAND—George F. Getty's Becker 1, 22-4-26, will test showing at 2900 ft. Lincoln Drilling Co.'s Williams 1, 32-4-16, dr 2000 ft.

SURF—Keystone Petroleum Co.'s True Fanch 1, ready to spd.

VENTURA COUNTY

CONEJO—American Oil Co.'s 1, 33-2-20, dr hard sand 1192 ft. Triunfo Oil Co.'s 1, 24-1-19, dr shale 1306 ft.

FILLMORE—Frank Oil Co.'s 1, 35-4-20, dr 1800 ft.

LOCKWOOD—Lockwood Valley Oil Co.'s 1, 28-8-21, ready to spd.

MUD CREEK—Superior Oil Co.'s Kirtlan 1, 14-4-21, dr hard sand 475 ft.

OJAI—California-Ventura Oil Co.'s Lacrosse 1, dr brown shale 1800 ft.

PIRU—Bolsa Chica Oil Corp.'s Snow 1-A, 4-4-18, dr 200 ft. Pacific Western Oil Co.'s Tehmescal 5, dr hard sand 4076 ft.

SANTA PAULA—W. W. Bryant's Anlauf 3, 21-4-21, co 1165 ft. Empire Oil Co.'s 4, 13-4-21, dr shale 980 ft. San Pedro-Pt. Fermin Synd.'s 1, 13-4-21, 10-in cas cmt 900 ft.

RED MOUNTAIN—Miley Oil Co.'s Casitas 2-A, 7-3-23, dr blue shale 1400 ft.

SATICOY—Standard's Citrus 5, 10-2-22, dr brown shale 6750 ft.

SIMI—Shell's Marr 1, 31-3-17, re-dr 2450 ft.

VENTURA—Federal Oil Co.'s Sexton 1, dr sandy shale 3985 ft.

MISCELLANEOUS

FRESNO COUNTY—Currency Pet. Co.'s 1, 28-21-14, dr shale 2200 ft; No. 2, 14-21-14, dr hard shale 150 ft. Fresno-Madera Synd.'s 1, 18-12-21, fsh for bit 4200 ft. Hornaday and Huggins' 1, 32-14-28, co 3710 ft. Oceanside Oil Co.'s Thomas 1, 33-22-16, cmt 12¼-in cas 400 ft. Petroleum Securities' Ladd 1, 28-20-16, rigging up rotary.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, rig.

MONTEREY COUNTY—W. R. Brown's 1, 29-23-14, dr 100 ft. C. H. Braden's 1, 19-23-15, rigging up cable outfit. Marland's Naciemento 1, 32-24-11, dar gray sand 5845 ft. Shell's Dud-

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ley 1, 15-22-9, coring 2888 ft. Union's Paige 1, 8-22-8, dr shale 400 ft.

SAN LUIS OBISPO COUNTY—Midwest Refining Co.'s Porter 1, 34-31-15, rigging up cable tools. Painted Hills Oil Co.'s Pecho 1, 34-30-10, rigging up cable tools. Panorama Oil Co.'s 1, 7-31-21, dr shale 3875 ft. Paso Robles Oil Co.'s Emerick 1, 27-27-11, dr brown shale 733 ft. T. H. Purman's 1, 12-32-22, sdtr pipe 2320 ft, td 2640 ft. Texas Coal and Oil Co.'s Dutton 1, 25-32-14, 11¾-in cas cmt 1600 ft, td 1810 ft. Union's Russ 1, dr brown shale 3707 ft; Chandler 1, re-dr 3215 ft.

KANSAS

STEPHENS COUNTY—Trees Oil Co.'s Candy 1, sw ne sw, 30-35-38w, mvg in rotary.

SUMNER COUNTY—Davidson et al's Strickland 1, sw se, 12-35-1w, rig.

STEPHENS COUNTY—W. Sidewell et al's Kelly 1, sw ne, 16-34-38w, sd 1310 ft.

BARBER COUNTY—Skelly's Temple, Ranch 1, sw ne, 13-34-15w, rig.

HARPER COUNTY—Amerada's Mendiville 1, c se se, 24-34-6w, td 5452 ft. d and a.

SUMNER COUNTY—Morgan & Carey Hawkins 1, sw se, 9-34-1e, spd. Marland's Curry 1, nw sw, 26-34-2e.

BARBER COUNTY—Barbara Oil Co.'s Angel 1, c nw ne, 14-33-13w, dr 3635 ft. Robertson et al's Powell 1, c se se, 11-32-10w, rig.

COWLEY COUNTY—J. B. Markey's Tatum 1, se sw, 11-31-6e, sd 500 ft. Marland's Hiatt 1, sw ne, 8-31-6e, fsh 2125 ft.

BARBER COUNTY—Roland's et al's Pickens 1, ne nw ne, 27-30-14w, hfw 4695-4718 ft d and a. Allison & Fitzwilliams' Morrise 1, c nw se se, 9-30-12w, dr 3200 ft.

KINGMAN COUNTY—Gypsy's Kincaid 1, ne nw, 18-29-5w, dr 3345 ft.

SEDGWICK COUNTY—Johnson & Marshall's Roy 1, c ne se sw, 23-29-1w, spd. Lario Teachoiff 1, ne sw, 27-19-1w, ru. Sullivan et al's Skelly 1, c nw ne se, 32-29-2e, sd 2990 ft.

PRATT COUNTY—Jones & O'Haver Lunt 1, csw nw, 15-28-14w, fsh 2540 ft.

SEDGWICK COUNTY—Hartman & Skaer & Carter's Hitchinson 1, c se se sw, 23-28-2w, dr 3835 ft. Magnolia's Wise 1, nwc, 36-22-1w, dr 3515 ft. Maglason's (now Kellar & Lewis) Buckles 1, nw se, 3-28-1w, dr 200 ft. Kyle et al's Pinney 1, c sw ne se, 29-28-1w, spd. Shawver et al's Scott 1, c se sw sw, 10-28-1e, 8-in cas 2412 ft. LaFont et al's Carlton Bros. 1, c se se sw, 24-28-1e, sd 1200 ft.

KIOWA COUNTY—Wilcox O. & G. Co.'s Woodward 1, nec, 35-27-17w, dr 3370 ft.

SEDGWICK COUNTY — Prairie-Slick's Rosenhagen 1, c sw se ne, 33-27-4w, dr 4637 ft. Miller & Wentz's Shaeffer 1, nw ne, 9-27-2w, dr 2775 ft. Hammond & Stout's Roeder 1, sw nw, 23-27-2w, sd 1688 ft. Blankenship & Washoma's Tuttle 1, sw nw, 1-27-1e, 5-in cas 3380 ft.

BUTLER COUNTY—Alladdin's Bronsenger 1, ne se, 24-27-3e, dr 600 ft.

RENO COUNTY—Austin Drlg. Co.'s Strickey 1, swc nw, 12-26-5w, fsh 2550 ft.

SEDGWICK COUNTY—Washabaugh's Harrison 1, c nw ne, 3-26-2w, sd 350 ft. Frank Wahn's Wilson 1, c ne nw se, 9-26-1w, rig and tools. Kroeder et al's Harden 1, sw nw sw, 20-25-1e, sd 1100 ft. Simmons & Canary's Scott 1, ne nw ne, 22-26-1e, dr 800 ft. Burnett's Davidson 1, c nw nw sw, 27-26-1e, dr 2400 ft. Twist et al's Armstrong 1, ne nw, 28-26-1e, spd and sd. Patton & Wentz's Swanson 1, nw ne, 6-26-6e, pump 87 bbls. oil and 400 bbls water. Producers Oil Co.'s Jones 1, c sw ne se, 31-26-2e, co 3012 ft.

EDWARDS COUNTY — Amerada-Wilcox's Teansil 1, nw, 32-25-19w, td 5195 ft d and a.

SEDGWICK COUNTY—Empire's Henderson 1, swc, 35-25-4w, dr 3225 ft. Deering-Marshall's Dick 1, c sw, 4-25-1w, csg trouble 2345 ft. Connell & Slick's Mahannah 1, c ne se se, 3-25-1w, ur 6-in cas 3290 ft. Twist et al's Joseph 1, 4-25-1w, sd 1980 ft. Morgan et al's Corn 1, sw ne, 28-25-1w, dr 3675 ft.

BUTLER COUNTY—White Eagle's Bacholder 1, sw c, 17-25-3e, dr 1045 ft.

RENO COUNTY—Skelly's Birkett 1, ne sw, 30- 24-7w, rig.

HARVEY COUNTY—Independent & Reserve's Moulds 1, c ne, 7-24-1w, dr 865 ft. Jolly & Ogg's Randall 1, nec, 11-24-1w, sd 3444 ft. Patton et al's Buning 1, cse sw ne, 18-24-2e, fsh 2925 ft hfw.

BUTLER COUNTY—Crawford et al's Thompson 1, nw sw, 2-24-3e, sd 200 ft. Shell's Thiesstein 1, c se sw se, 10-24-3e, 2830 ft. Smith & Ash's Donnelly 1, nec, 8-24-6e, hfw, td 3003 ft.

HARVEY COUNTY—Rosenthal et al's Ingalls 1, c nw sw, 24-33-3w, sd 2370 ft, hfw. McCulloch's Prouty 1, nw sw, 3-23-1w, dr 328 ft. Jolly & Ogg's Hupp 1, se ne, 22-23-1w, ur 8-in cas 2945 ft. Margaret Gay Oil Co.'s 1, nw ne nw, 29-33-1w, ur 8-in cas 2720 ft.

HODGEMAN COUNTY—Phillips' Houseman 1, c nw ne ne, 30-22-22w, rig.

RENO COUNTY—Perry et al's Oswald 1, ne ne se, 30-22-5w, dr 3520 ft.

HARVEY COUNTY—Roth & Fauret's Bombrowsky 1, nwc, 26-22-1e, dr 2375 ft. Prairie & Slick & Cennell Oil's Gatz 1, nw se, 30-22-1e, dr 2862 ft.

PAWNEE COUNTY—F. C. Troupe's Lovett 1, cel ne ne, 31-21-16w, sd 1560 ft.

McPHERSON COUNTY—Ted Washabaugh's Vosshell 1, ne ne, 9-21-3w, fsh 3302 ft. Helmerich & Payne's Rosen 1, c ne se sw, 23-21-2w, dr 2490 ft. Helmerich & Payne's Klassin 1, se ne ne, 14-11-1w, spd and sd.

MARION COUNTY—Holworth et al's Skiles 1, se nw nw, 30-21-3e, sd 1945 ft.

RICE COUNTY—Neggins & Steinbuble's Shurr 1, ne nw, 21-20-10w, ½m gas, td 2305 ft.

McPHERSON COUNTY—Slick-Pryor & Lockhart's Gratten 1, c ne nw nw, 34-20-3w, ru. McPherson's Reitz 1, nw se sw, 1-20-2w, hfw 2453 ft. Tatlock et al's Meyer 1, c sw sw ne, 32-20-1w, dr 2445 ft.

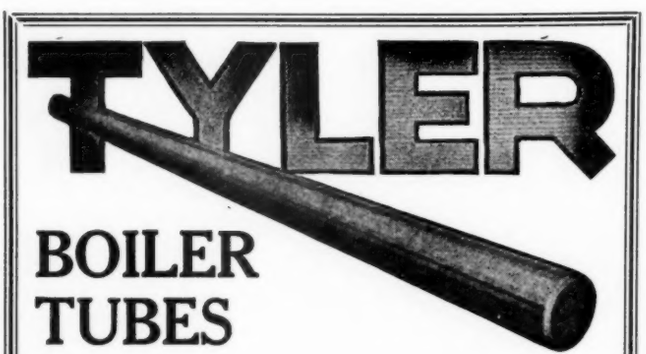
MARION COUNTY—Skelly's Mehl 1, nw ne, 11-20-4e, spd and sd.

RUSH COUNTY—Danciger O. & R. Co.'s Pinonka 1, c nw sw ne, 17-19-17w, 6-in cas 3420 ft.

RICE COUNTY—Allison & Fitzwilliams' Poland 1, ne nw ne,, 36-19-8w, cellar.

McPHERSON COUNTY—McPherson's Decker 1, c se, 11-19-2w, dr 2525 ft; Chindberg 1, c nw nw, 18-19-2w, dr 876 ft.

MARION COUNTY—Moore et al's Miller 1, nec, 26-19-1e, ur 6-in cas 2780 ft. Empire's Skully 1, c sw ne ne, 28-19-2e, ur 8-in cas 2440 ft. General Utilities Burkholder 1, csl n½



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Galveston, Texas

se, 8-19-3e, fsh 2760 ft; Propp 1, c ne se sw, 8-19-4e, rig.

LANE COUNTY—Robinson et al's Dickerson 1, swc nw se, 11-18-27w, cmtg 8-in cas 2625 ft.

NESS COUNTY—E. W. Marland's Moses 1, ne se, 7-18-25w, rig. Barnsdall's Lauck 1, c sw, 35-18-21w, 6-in cas 4208 ft.

RUSH COUNTY—Sinclair's Seur 1, c se nw nw, 8-18-17w, dr 2186 ft.

McPHERSON COUNTY—E. W. Marland's Swanson 1, c ne sw ne, 36-18-4w, rig. McPherson County Gas Co.'s Rasmussen 1, swc, 8-18-3w, sd 805 ft.

MARION COUNTY—Meyer's Papp 1, sw ne, 16-18-2e, ur 5-in cas 3070 ft. Shell's Scully 1, nw ne, 34-18-2e, rig. Contl & Prairie's Zirak 1, se sw, 3-18-3e, dr 2606 ft. Hartman & Skaer & White Eagle's Kline 1, ne nw, 28-18-3e, hfw 2965 ft d and a.

RUSH COUNTY—Barnsdall's Brock 1, c se se, 21-17-17w, fsh 2460 ft. Danciger's Swindt 1, c sw se sw, 22-17-17w, dr 2810 ft. Wilcox O. & G. Co.'s Schwartz Roph 1, c ne nw nw, 27-17-17w, dr 3660 ft. Central Commercial's Brock 1, nec sw sw, 12-17-16w, spd and sd.

RUSSELL COUNTY—Gobel & Bending's Bartlett 1, c sw sw, 28-17-15w, dr 1190 ft.

LANE COUNTY—Blankenship Pet. Co.'s Shaeffer 1, nec ne, 24-16-28w, spd and sd.

ELLSWORTH COUNTY—Texas' Sherman 1, ne sw, 16-17-6w, rig.

SALINE COUNTY—M. Esty et al's Peterson 1, c ne, 6-16-5w, spd and sd. Boyle et al's Miller 1, swc se, 21-16-1w, dr 1135 ft.

DICKINSON COUNTY—Prairie's Morgan 1, nwc, 26-16-3e, dr 1135 ft. Milmac et ali's Biehler 1, sw ne, 28-16-4e, dr 1410 ft. T. C. Johnson's Detweiler 1, swc ne nw, 32-16-4e, ur 5-in cas 2775 ft.

ELLIS COUNTY—Rush Oil Co.'s Gatewood 1, nw, 4-15-20w, dr 3069 ft. Finney & Weimer's Freeman 1, nw se se, 24-15-20w, spd and sd.

RUSSELL COUNTY—Prairie-Slick's Sellans 1, sw ne, 36-15-13w, dr 3300 ft.

SALINE COUNTY—Dixie's Muiri, csw se sw, 6-15-2w, dr 2446 ft.

MORRIS COUNTY—Hiatt et al's Blythe 1, nw ne, 35-15-5e, dr 2225 ft.

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HOUSTON, TEXAS

ELLIS COUNTY—T. C. Johnson's Robbins 1, sw nw, 15-14-16w, dr cmt 2900 ft.

RUSSELL COUNTY—Allison & Fitzwilliams' Mahoney 1, nw se, 5-14-12w, dr 2440 ft.

SALINE COUNTY—Kenning-Coastal Co.'s Beal 1, c, 23-14-5w, dr 3465 ft.

TREGO COUNTY—Central Commercial Oil Co.'s Ellis 1, ne sw ne, 29-13-21w, pulling lig pipe.

ELLIS COUNTY—Phillips' Johnson 1, sw ne, 9-13-19w, dr 3400 ft. Brown's Gestner 1, nw sw nw, 13-13-18w, dr 2930 ft. Phillips' Dechart 1, ne se, 12-13-16w, td 3440 ft d and a.

SALINE COUNTY — Kenning-Coastal's Hughes 1, cw½ ne nw, 20-13-4w, spd and sd.

WALLACE COUNTY—Menton & Entyre's Parker 1, c se nw sw, 8-12-41w, rig.

ELLIS COUNTY—Phillips Schmeidler 1, nw, 20-12-17w, subg.

TREGO COUNTY—Day et al's Gaylor 1, c sw ne ne, 36-12-21w, ru.

RUSSELL COUNTY—Phillips' Solback 1, se nw, 32-12-14w, dr 3190 ft.

OTTAWA COUNTY—Day et al's Unknown 1, c ne nw sw, 2-11-2w, spd.

ELLIS COUNTY—Burger et al's Hadley 1, c sw sw nw, 20-11-17w, dr 1325 ft.

GEARY COUNTY—Wright et al's Younkers 1, nwc ne, 17-11-5e, 6-in cas 2170 ft.

OSBORNE COUNTY—Jarvis' Jellison 1, sec, 13-10-15w, dr 3390 ft.

OTTAWA COUNTY—Anderson et al's Bank 1, ne nw, 29-10-2w, cmt cave 3670 ft.

JEFFERSON COUNTY—Wichita Oil Co.'s Simpson 1, nw sw sw, 19-10-17e, ru and sd.

ROOKS COUNTY—Prairie's Gick 1, c se, 22-9-18w, sd 3585 ft. Burford & Brimm's Toxa 1, ne sw se, 22-9-17w, spd and sd. Drueger et al's Steis 1, c nw sw, 12-9-16w, spd and sd.

OSBORNE COUNTY—Empire's Crest 1, se ne, 30-9-14w, sd 3775 ft.

GRAHAM COUNTY—Gulf Coast's Johnson 1, swc sw se, 27-8-15w, sd 3600 ft.

SHERMAN COUNTY—A. L. Hanson et al's Murray 1, ne se nw, 22-7-40w, sd 3035 ft.

RILEY COUNTY — Derby-Skow Bros.' Lundstrum 1, ne, 32-7-5e, machine.

OSBORNE COUNTY—Trees' Payenter 1, c ne se se, 22-6-15w, dr 1550 ft. Mid-Kansas' Boyce 1, se nw, 8-6-13w, sd 300 ft.

RILEY COUNTY—Gray et al's Smith 1, ne se, 30-6-6e, dr 945 ft.

SMITH COUNTY—Phillips' Clydesdale 1, se nw, 23-5-14w, rig.

WASHINGTON COUNTY—McCol & Vincent's Lin 1, nw ne, 27-4-3e, dr 1500 ft.

MARSHALL COUNTY—Irwin et al's Cooper 1, ne nw, 10-3-7e, dr 2020 ft.

PHILLIPS COUNTY—Watsonian & British American's Weiman 1, c sw sw, 34-2-19w, dr 2390 ft.

SMITH COUNTY—Mid-Kansas' Lambert 1, nec, 4-2s-13w, dr 3946 ft.

TEXAS GULF COAST

Company, Well and Location		Initial Production Bbls.	Depth
FORT BEND COUNTY—			
South Texas Pet. Co., Winkleman 1	*	4652	
WALLER COUNTY—			
The Texas Co., Young 1, 3 mi e Raccoon Bend	*	4011	
COLORADO COUNTY—			
Humble, Werle 1, Altair	*	900	

AUSTIN COUNTY—F. & M. Drilling Co.'s Mewis 1, between Raccoon Bend and Bellville, dr 3530 ft sand and shale. Whittington et al's Lass 1, 4 mi nw Beellville, dk.

BRAZORIA COUNTY—Humphreys Corp.'s Bryan 1, Bryan Heights, sd 3446 ft. Empire's Brock 3, Stratton Ridge, dr 4135 ft sand and lime. Thos. Faust et al's Fee 4, 2 mi s Nash Dome, ru.

CALHOUN COUNTY — Baker & Thompson's Thomas 1, 9 mi w Pt. Lavaca, sd 2730 ft.

CHAMBERS COUNTY — Pure's Mayes 2, Lost Lake, sd 1990 ft; Mayes 3, Lost Lake, sd 1870 ft. Chicago Oil Corp.'s Lawrence 1, 10 mi s Barbers Hill, lcn. Layne et al's Fitzgerald 1, 1 mi s Barbers Hill, dr 1075 ft gbo.

COLORADO COUNTY — Merret et al's Zverck 1, 2 mi e Ellinger, sd 320 ft. Rich Oil Corp.'s Von Rosenberg 2, 3 mi w Alleyton, dr 2100 ft limy gbo.

FAYETTE COUNTY—Moore et al's Kerr 1, Muldoon, 2410 ft rock.

FORT BEND COUNTY—Humble's Miller 1, 3½ mi w Rosenberg, set 13⅜ cas. South Texas Pet. Co.'s Winkleman 1, Needville, abn 4650 ft. Gulf's Trone 12, Long Point, lcn. Grayburg Oil Co.'s Ransom 1, s Richmond, lcn.

GOLIAD COUNTY—Humble's Taylor 1, 5 mi n Goliad, dr 600 ft gbo.

HARDIN COUNTY—Gulf Coastal Oil Co.'s Nona Mills 1, 5 mi e Saratoga, sd 1725 ft. West Prod. Co.'s Baker 1, 5 mi e Saratoga, sd 4405 ft.

HARRIS COUNTY—Humble's Simms-Smith 75, Goose Creek, pulled screen at 4486 ft; Warren 5, Hockley, set 7-inch cas at 4772 ft; Irvin 1, Mykawa, abn at 3810 ft; Williams 1, Humble, sdtr 4650 ft; Woodburn 1, 2 mi s Genoa, dr 2270 ft lime rock. Paxton et al's Brubacker 1, 1 mi ne Clodine, sd 1125 ft. Paxton & Pundt's Brown 1, sd 1900 ft. Little York Oil Co.'s Davis 1, Little York, sd 3830 ft. York & Robertson's Garrett 1, 5 mi se Fauna, ru.

JEFFERSON COUNTY — Deep Test Oil Corp.'s McFaddin 1, 1½ mi e Spindle Top, sd 3500 ft. J. W. Farhar et al's Rohwedder 1, 5 mi ne Beaumont, sd 2965 ft. River Oil Co.'s Ship Channel Land Co. 1, 2 mi se Beaumont, sd 1710 ft. Bleakie Oil Co.'s Tolliver 1, 2½ mi nw Voth, dr 2585 ft shale and lime. The Texas Co.'s Pipkin 1, Big Hill, dr 5958 ft sticky shale. Gulf's Thomas 11, Fannett, completed for 800 bbls at 5650 ft; Bordages A-7, Fannett, dr 5850 ft. Shell's Heisig 1, 2 mi n Hampshire, dr 5313 ft shale and lime. Nederland O&G Co.'s Young 1, s Nederland, dr 2520 ft gbo.

LIBERTY COUNTY—Humble's Sterling 5, Moss Bluff, dr 3085 ft shale. Pure's Liberty Investment Co. 1, Moss Bluff, dk. Republic Prod. Co.'s Mysilvec 1, 2 mi s Hardin, dr 3965 ft shale and lime. Gulf Prod. Co.'s Boyt 2, Hankamer, ru. Fort Bend Oil Co.'s Bladerack 1, N. Dayton, dr 4150 ft sticky shale. Sun Oil Co.'s Kavaleik 2, N. Dayton, dr 4905 ft shale.

MATAGORDA COUNTY—Crossland et al's Hawkins 1, Shepherds Mott, sd 5260 ft. West Prod. Co.'s Meyers 1, 1½ mi n Gulf Hill, set screen 4405 ft, bailing.

ORANGE COUNTY — Veteran Oil Co.'s Reed 1, 2 mi se Orange field, dr 4200 ft lime and shale.

VICTORIA COUNTY—Humble's Welder 1, 3 mi se Nursery, set casing 2176 ft.

WALLER COUNTY — The Texas Co.'s Young 1, 3 mi e Raccoon Bend, abn 4011 ft.

WASHINGTON COUNTY—Thomas et al's Giddings 1, 4 mi e Brenham, r 1405 ft. Brains et al's L. S. Smith 1, 4½ mi ne Gay Hill, sp. Kellett et al's Carter 1, sd 900 ft. Dekle et al's Calhoun 1, 4 mi se Quarry, sd 800 ft.

WHARTON COUNTY — Harte Oil Co.'s Brown 1, 3 mi s El Campo, sd 3500 ft.

SOUTHWEST TEXAS

GUADALUPE COUNTY—			
Christie et al, Thomas 1, 12 mi ne Seguin	*	1280	

BASTROP COUNTY — Gypsy Prod. Co.'s Lottman 1, e Bastrop, sd 2565 ft shale. Livingston et al's McCall 1, 1 mi s Bastrop, fsh 2910 ft. Owens et al's Goodman 1, 1½ mi Cedar Creek, sd 2330 ft. Howell et al's Weckham 1, 2 mi s Paige, dr 675 ft shale.

CALDWELL COUNTY—Anderson et al's Horner 1, 1 mi s Lockhart, sd 1400 ft. Forest Oil Co.'s Moore 1, ½ mi s Luling, fsh 1500 ft. Harper et al's Miller 2, ¾ mi w Lytton Springs, dr 1200 ft. Detex Oil Co.'s Keefer 1, 3½ mi w Luling, ru.

GONZALES COUNTY—Greene et al's Dix 1, sw part of county, sd 1235 ft. Linderman Bros.' Frampton 1, 1 mi n Waelder, sd 610 ft. Joe Bruner's Miller 1, 1 mi n Gonzales, set cas 2710 ft. Finnell & Elam's J. F. Robinson 1, J. Livergood sur, dr 1250 ft shale. Crown Pet. Co.'s Hattenbach 1, 8 mi sw Sample, dr 2000 ft gbo. Ft. Bend Oil Co.'s Hamm 1, 2½ mi e Harwood, dr 1700 ft shale.

GUADALUPE COUNTY — Christie et al's Thomas 1, 12 mi ne Seguin, abn 1280 ft. Sights et al's Woehler 1, 4 mi e Seguin, sd 2405 ft. Miller Bros.' T. A. Springs 1, 5 mi s Seguin, sd 2625 ft. Magnolia's Adams 1, Kingsbury, dr 2590 ft lime. Trinity Drillers' Weinang 1, 4 mi s Kingsbury, dr 490 ft sand and shale. The Texas Co.'s Dallas Wilson 1, 12 mi e Seguin, dk.

MAVERICK COUNTY—Rycade's Chittim 3, 20 mi e Eagle Pass, dr 3965 ft lime; Chittim 4, dr 3305 ft; Sullivan 4, 20 mi e Eagle Pass, dr 3065 ft.

STARR COUNTY—The Texas Co.'s Virginia Guerra 1, dr 3703 ft shale.

SOUTH LOUISIANA

ACADIA PARISH — Yount-Lee Oil Co.'s Crowley 4, Evangeline, dr 7290 ft.

ASCENSION PARISH—Gulf's United Lds. Co. 14, Sorrento, 3925 ft. Triumph Oil Corp.'s Lacey 2, 3 mi se Sorrento twnste, sd 2570 ft. Big Dome Drlg. & Dev. Co. & J. S. Kimbrough's Rearwood 1, Darrow, dr 4550 ft shale.

CALCASIEU PARISH—J. O. Davis' Mimms 1, Lake Charles, dr 4480 ft gbo.

CAMERON PARISH—The Texas Co.'s Calcasieu Lake B-5, E. Hackberry, lcn. Calcasieu Lake A-4, s pt. Calcasieu Lake, lcn. Pure's Yount-Lee 7, Sweet Lake, r at 5425 ft. Shell's Watkins 11, Black Bayou, dr 1250 ft.

IBERIA PARISH — The Texas Co.'s Vermilion Bay A-3, abn 4700 ft. Gulf's State Z-9, Loreauville, pulling screen to deepen from 815 ft.

IBERVILLE PARISH—Shell's Wilbert 3, White Castle, dr 5236 ft sandy lime. Standard of La.'s Wilbert 2, Bayou Blue dome, 3505 ft salt; Wilbert 3, Bayou Blue, ru; Schwing 1, Bayou Blue, 4755 ft lime; Schwing 2, Bayou Blue, ru; Schwing 3, Bayou Blue, canal to lcn.

LA FOURCHE PARISH—Gulf's Stark 14, Thibodaux, moving in materials; Stark 15, Thibodaux, moving in; Stark 17, Thibodaux, dr 910 ft gbo; Stark 12, Thibodaux, sdtr 1300 ft.

PLAQUEMINES PARISH—Gulf's Morris & Rose 1, Spanish Pass, dk. The Texas Co.'s Garden Island Bay 2, 15 mi se Venice, lcn. Humble's State Land 1, 2-20s-26e, lcn.

ST. BERNARD PARISH—Gulf Coast O&G Dev. Co.'s State Land 1, lcn.

ST. LANDRY PARISH—The Texas Co.'s Botney Bay Lbr. Co. Fee 2, Port Barre dome, came in flowing at rate 2000 bbls daily, quit after one hour, depth 3620 ft. Gulf's Gaudet 1, Port Barre , oil sand at 3830 ft, setting cas.

ST. MARTIN PARISH — Ohio Oil Co.'s Martin et al 3, Hager dome, sd 4490 ft. The Texas Co.'s St. Ld. Co. Fee 1, Hager dome, sd 1235 ft.

TANGIPAHOA PARISH—Joan Dev. Co.'s Lake Superior Piling Co. 1, dr 3650 ft sand.

TERREBONNE PARISH—The Texas Co.'s Taylor Bayou B-1, capped piling; Bay Coon Road B-2, lcn; Lake Barre A-2, capped piling; Lake Pelto B-1, dr 1020 ft sand; Four Isle Bayou B-1, dk; Timbalier Bay A-1, dr 2110 ft sand rock; Dog Lake Bayou A-1, lcn.

WEST TEXAS

Completions

COKE COUNTY—
W. C. Cates & J. S. Dennis, J. R. Mims 1 ..... * 2005

IRION COUNTY—
Fuhrman Pet. Corp., Sugg 1, Lse. 1 * 2004

JONES COUNTY—
Condor Pet. Co., McDonald 1 .... * 3002
P. K. French et al, Leeson 1..... * 1831
Sam Knepley et al, R. R. Horn 1.. * 2507

MITCHELL COUNTY—
H. H. Adams et al, Ellwood 2 .... * 572

PECOS COUNTY—
M. H. Black et al, Pecos Valley Fee 1 ..... 15 1648

STERLING COUNTY—
Miller Bros. et al, Foster 1..... * 3028

ANDREWS COUNTY — Mid-Continent Pet. Co.'s Fisher 1, elev 3192 ft, top salt 1720 ft, dr 4065 ft.

BORDEN COUNTY — W. A. Moncrief & Humble's Munger 1, lcn.

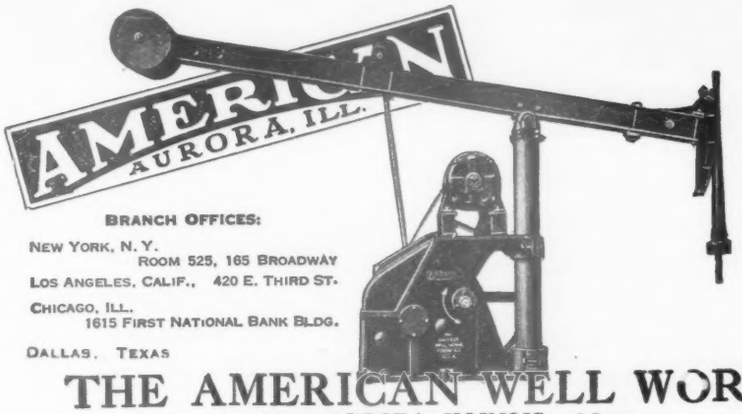
BREWSTER COUNTY—Ed. W. Bateman & Co.'s Nevill 1-A, machine. Brewster Oil Co.'s Fee 1, sd 1900 ft. E. L. Chapman et al's Skinner 2, machine. J. P. Johnson & Bert Weekly's Jackson-Harmon 1, elev 3972 ft, dr 1325 ft.

COKE COUNTY—Ray McCamey et al's McCutchen 1, lowering 8-inch cas 2550 ft. Mid-Kansas O&G Co.'s Lackey 1, elev 2152 ft, ur cas 3785 ft.

CONCHO COUNTY—J. L. Duffy et al's Gilliam 1, spudded and sd. Lloyd Jones & Joe Liner et al's Jones 1, top lime 1770 ft, testing oil pay at 1775-80 ft, td 1790 ft. A. W. Turner et al's Brosig 1, lcn.

CRANE COUNTY—Gulf Prod. Co.'s Waddell 7, elev 2763 ft, top salt 1108 ft, top brown lime 2972 ft, making 3 million fet gas, dr 3270 ft.

CROCKETT COUNTY—W. A. Moncrief-W. W. Donnelly's R. Massie 1, (Sec. 47), dr 1300 ft. Eppenauer Drlg. Co. & West Texas Pet. Corp.'s Noelke 1, sd 565 ft. Lewis & Daniels' Pecos River bed 1, elev 1967 ft, top



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lime 1002 ft, sd 1008 ft; Taylor-Link Oil Co.'s Powell 3, rig.

CULBERSON COUNTY — Deep Rock Oil Co. & Grisham-Hunter Corp.'s Kloh 3, machine. Hickey et al's Finley 1, elev 3916 ft, sd 2275 ft. Scott & Dittman's Miller 1, elev 4059 ft, sulphur water 2177 ft, dr 2320 ft. West Texas Oil & Explo. Co.'s McGregor 1, sd 620 ft.

JEFF DAVIS COUNTY—Sam F. Means et al's J. Z. Means 1, sd 4005 ft.

FISHER COUNTY — Cranfill-Reynolds & Sun Oil Co.'s Flannigan 1, elev 1798 ft, rig. Culbertson Bros. Co. & Mesa Oil Co.'s Griffin 1, elev 1842 ft, sd 2970 ft. Gilman-McMurray & French's Cleveland 1, elev 1973 ft, sr 6-inch cas 3530 ft. Magnolia's Alice Lee 1, dr 700 ft. Mid-Kansas & Phillips Pet. Co.'s Stephenson 1, bad hole 670 ft. Rosser-Pendleton & Amerada's Haught 1-A, dr 530 ft. The Texas Co. & Phillips Pet. Co.'s Hall 1, elev 2102 ft, top lime 3160 ft, dr 3565 ft. White Eagle O&R Co.'s Hughes 1, elev 1815 ft, dr 2430 ft.

GARZA COUNTY—Emerald Oil Co.'s Bargsley 1, lcn; Reed 1, top lime 1625 ft, swab 35 bbls oil and little water after shot 2485-2543 ft. Gulf's Street 1-D, dr 625 ft.

GLASSCOCK COUNTY—A. & F. Oil Co.'s S. Turner 1, dk. Gibson-Johnson et al's Dean 1, elev 2718 ft, top salt 1075 ft, dr 2130 ft. Houston Oil Co. et al's McDowell 1, dr 300 ft. Kirby Pet. Co. et al's J. J. Phillips 1, rig. Lion Oil Ref. Co.'s Coffee 1, lcn. Penn Oil Co. et al's Shaffer 1, lcn. Texas-State Oil Co.'s Edwards 1, rig.

TOM GREEN COUNTY—Williams et al's Wilkey 1, sd hfw 750 ft.

HOWARD COUNTY—Fuhrman Pet. Corp.'s Reed 1, dk. Gibson-Johnson et al's Reed 1, elev 2323 ft, top lime 1910 ft, 1700 ft oil in hole at 2703-08 ft, dr 2735 ft. Magnolia Pet. Co.'s Hyman 1, made 4 bbls oil 1308-13 ft. McGinley-Sigler Co.'s B. Hyman 1, (Sec. 92), sd 720 ft. Meriwether Oil Co.'s Eva Smith 1, rig.

HUDSPETH COUNTY — The California Co.'s University 1, elev 5833 ft, sr cas 1640 ft. Rio Grande Oil Co.'s Western States 1, elev 4799 ft, dr 1085 ft. Western States Oil Co.'s Gardner-Mosley 1, elev 5086 ft, sd 3155 ft; Moore 1, elev 5050 ft, sd 2760 ft.

IRION COUNTY—J. B. Crawford et al's Williams 1, spudded and sd. Kimbrough et al's Nutt 1, elev 2299 ft, sd 1420 ft. W. W. Brown-Perry Fox et al's Tankersley 1, elev 2241 ft, bailing 10 bbls oil daily 1318-29 ft. Kingwood Oil Co. et al's Sugg 1, elev 2334 ft, dr lime 6970 ft. Pecos Valley Oil Co.'s Stocks 2, dr 1040 ft. Webb et al's Nutt 2, lcn.

JONES COUNTY—Brewer et al's Goodman 1, lcn. Geo. Callahan & Worth Oil Co.'s Britton 1, dr 2835 ft. Campbell et al's King 1, spudded and sd. W. G. Clark et al's Miller 1, lcn; Newman 1, rig. Gilman-McMurray & Humble's J. F. Willis 1, ur cas with show oil 2047-48 ft. F. E. Shaheen et al's S. W. King 1, rig. McGinley-Sigler Co.'s Whittemore 1, dr 2330 ft. E. M. Treat O&G Co.'s Hodges 1, dr 1725 ft. White Eagle O. & R. Co.'s Teague 1, dr 1690 ft.

LOVING COUNTY — Lockhart & Co.'s Bower-Wells 2, dr 475 ft; Hazell 1, elev 2705 ft, dr 1740 ft; Hazell 2, top salt 700 ft, dr 2735 ft; Johnson 2, cem 6-inch cas 3117 ft, td 3122 ft; Wheat 1-H, elev 2713 ft, top salt 720 ft, top Delcware 4152 ft, sd after shot, td 4197 ft.

LYNN COUNTY—Hart Oil Corp. & Geo. McCamey's Edwards 1, elev 3128 ft, top salt 2140 ft, cem 8-inch cas 2509 ft.

MENARD COUNTY—J. L. Duffey et al's Winslow 1, sd 1010 ft.

MIDLAND COUNTY — Phillips Pet. Co.'s Stokes 1, elev 2666 ft, top salt 1610 ft, top lime 3720 ft, dr 3945 ft.

MITCHELL CONUTY—The California Co.'s Clark 2, top lime 1540 ft, co with oil in hole 2962-3038 ft; Handley 1, spudding. Clopton & Hammond's McKenzie J, lcn. McGinley-Sigler Co.'s H. Hyman 1, (Sec. 91) dr 1860 ft. Simms Oil Co.'s Ellwood 1, elev 2237 ft, top lime 1215 ft, dr 4265 ft. Republic Prod. Co.'s Scott 1,

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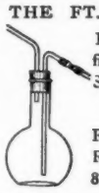
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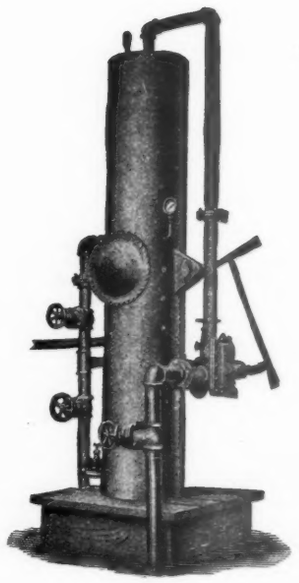
Many separation problems have reached us in the course of our manufacture of oil and gas separators
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May we help you with your problems?
Trumble Gas Trap Company
756 Subway Terminal Building
LOS ANGELES, CALIF.
ALBERTA, WYOMING and MONTANA
Great Northern Tool & Supply Co.
Billings, Montana
VENEZUELAN REPRESENTATIVE
Johnson & Schnitter
Apartado 324
Maracaibo, Venezuela

dr 1220 ft. Spence et al's Brown 1, elev 2328 ft, top salt 730 ft, sd 802 ft. Teas & Wheeler's Radford 1, sd 4048 ft. Westyde Inv. Co.'s Ellwood 1, dr 835 ft.

NOLAN COUNTY — L. G. Bradstreet & Co.'s Kuteman 1, dr 1810 ft. Phillips Pet. Co.'s Plunkett 1, sd 1500 ft.

PECOS COUNTY—Harry Adams Drlg. Co.'s University 1, dr 525 ft. Atlantic Oil Prod. Co.'s J. C. Trees 1, elev 2489 ft, trace oil 1570-76 ft, dr 1645 ft. Buell-Hagan et al's University 1-B, elev 2760 ft, top salt 945 ft, 3 million ft gas and 400 ft oil in hole 1320-32 ft. Karl Crowley et al's Heiner 1, elev 2548 ft, sd 1302 ft. Ditto Oil Interests' Montgomery 1, elev 4434 ft, sd 1505 ft. Doran & McGee's Pecos 1, elev 2437 ft, top salt 1080 ft, dr 1430 ft. Cowboy Evans et al's Pecos 1, sd 280 ft. Gibson-Johnson et al's Grace 1, fsh 300 ft. J. W. Grant et al's Turney 1, elev 2592 ft, top lime 1015 ft, sd 4590 ft. Independent O&G Co.'s H. Rayburn-Iowa Realty Co. 1, dr 515 ft. Sam Kitts et al's Sherbino 1, fsh 250 ft. Marland Prod. Co.'s University 1, spudding. Mauch & Krogen's Holmes 1, elev 2325 ft, top salt 535 ft, sd 1442 ft. W. A. Moncrief et al's Torberg 1, lcn in se cor w½ Sec. 539, block 12, H&GN survey. R. E. Moore et al's Arnold 1, dr 585 ft. J. D. O'Mara et al's Byrne 1, dr 730 ft. Phillips Pet. Co.'s D. W. Bowser 1, dr 280 ft; Courtney-Pryor 1, elev 2951 ft, trying cas off oil 1345-75 ft with 10-inch pipe, td 1535 ft. Plymouth Oil Co.'s Perry 2, elev 2899 ft, top salt 1060 ft, tested 4 bbls oil and 4 bbls water at 1772-76 ft. Rio Pecos Oil Co.'s Yates 2, set cas 425 ft. Schumaker et al's Williams 1, elev 2388 ft, sd 1200 ft. Shell Pet. Corp.'s University-Bower 1, elev 2486 ft, top salt 765 ft, dr 1540 ft. Shell & Kirby Pet. Co.'s University 1, elev 2628 ft. dr 4910 ft. Ervin Drlg. Co. & B. J. Spikes et al's Brown 1, elev 2387 ft, top salt 740 ft, sd 1826 ft. Talbot et al's Unsicker 1, machine. Taylor-Link Oil Co.'s University 1, elev 2500 ft, top salt 835 ft, top lime 1375 ft, flowing est. 80 bbls 27.6 degree oil daily by heads at 1613-25 ft. Tidal Oil Co.'s University 1, elev 2482 ft, top salt 784 ft, top lime 1270 ft, dr 1280 ft. Transcontinental Oil Co.'s University 1, elev 2552 ft, top lime 1035 and 3315 ft, dr by tools 4312 ft. Clayton W. Williams et al's Sanford 1, sd 500 ft. World Oil Co.'s Kloh 1, elev 2810 ft, co 3105 ft.

PRESIDIO COUNTY — Brite Prod. Co.'s L. C. Brite 4, dr 315 ft. C. E. Miller-Delmar & Phillips Pet. Co.'s Tootle 1, ur cas from 2508 ft to test show gas 2707 ft.

REAGAN COUNTY — Big Lake Oil Co.'s University 1-C, elev 2731 ft, top salt 100 ft, sd for 16-inch cas 2636 ft; University 2-C, elev 2703 ft, top salt 1071 ft, co 2891 ft; University 131, showing oil in hole from 6830 ft, dr soft shale 7439 ft; University 151, sd 3035 ft.

REEVES COUNTY — Earl Hemby et al's Brooks-Huling 1, spd and sd. Penn Oil Co. et al's Bowles 1, elev 2783 ft, top salt 1725 ft, trace gas and oil, dr 5450 ft. Southern Crude Oil Pur. Co.'s Kloh 1, elev 2784 ft, cem cas 1463 ft. D. R. Thompson et al's Eddins 1, elev 2719 ft, top salt 1622 ft, top gray lime 3216 ft, sr 5658 ft. Lee O. White et al's Mrs. Lizzie Hershenson 1, elev 3244 ft, cem cas, td 1530 ft.

RUNNELS COUNTY—Herbert Oil Co. et al's Currie 1, dr shale 1465 ft. Independent O. & G. Co.'s Rollwitz 1, dr gray lime 3590 ft. Ira Nourse & E. Tilton's Cramer 1, elev 1775 ft, showing oil, lowering 5-inch cas from 3815 to 3825 ft.

SCHLEICHER COUNTY—Ft. McKavitt Oil Co.'s Tisdale 1, elev 2155 ft, set 6-inch cas 3023 ft. Interstate Explo. Co.'s Whitten 1, sd 3545 ft. Underwood Oil Co.'s Tisdale 1, spudded and sd.

SCURRY COUNTY—R. B. Pender et al's Davis 1, elev 2208 ft, top salt 445 ft, fsh 2900 ft. Texas-Canadian Oil Co.'s S. W. Mooar 1, lcn.

SUTTON COUNTY — Phillips Pet. Co.'s Holman 1, elev 2247 ft, top lime 2315 ft, fsh 6633 ft. L. G. Priest et al's Allison 1, fsh 2440 ft.

TAYLOR COUNTY—J. B. Jameson et al's Webb 1, elev 1905 ft, dr 3810 ft. C. M. Root Drlg. Co.'s Martin 1, fsh 2450 ft. Magnolia Pet. Co.'s W. E. Hamner 1, est 2 bbls oil daily at 2740-42 ft.

TERRELL COUNTY — Keck Pecos Oil Trust's Hamilton 1, elev 1733 ft, sd 2450 ft. Msr. J. B. McPhee et al's Sam Belt 1, sd 510 ft. Milham Corp.'s Bassett 1, elev 2270 ft, fsh

BUY OR RENT USED PIPE
and Save the Difference

15,000'—5-3/16" Casing
10,000'—6⅝" Casing
5,000'—8¼" Casing
10,000'—10" Casing
2,000'—12½" Casing
2,000'—15½" Casing

50,000'—2" Line Pipe
50,000'—3" Line Pipe
20,000'—4" Line Pipe
15,000'—6" Line Pipe
5,000'—8" Line Pipe

We will rent this casing or any other pipe which you may need. Let us finance your operations by carrying your pipe and casing investment for you.

BRANCH STORES
Wichita Falls, Holliday, Vernon, Breckenridge, Pampa, Texas

EASTERN HEADQUARTERS
Butler, Penna.

Keystone Pipe & Supply Co.
HOLMES BUILDING
FORT WORTH, TEXAS

Gott Water Cans & Coolers

. . . Have a cool supply of clean-pure sparkling water . . . ready to drink at all times. No matter where you are the GOTT Water Can is health insurance. Your supply store has them.

GOTT Water Cans 1½ gal; 3 gal; 5 gal; and 10 gal.

GOTT Water Coolers 3 gal; 5 gal; 8 gal; 10 gal; and 20 gal.

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H. P. GOTT MFG. CO. · Winfield, Kansas
KEEP PURE DRINKING WATER ALWAYS HANDY

CARBON (BLACK DIAMONDS)
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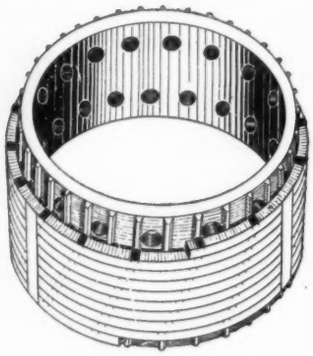
DIAMOND POINTED TOOLS FOR ALL MECHANICAL PURPOSES

WRITE OR WIRE FOR CATALOGUE AND FULL PARTICULARS
THE DIAMOND DRILL CARBON CO.
PARK ROW, NEW YORK, N.Y. CABLE ADDRESS, CREDOTAN, N.Y.

How you GAIN

by using

this well screen



NOTE IN THE ILLUSTRATION that the entire area of the pipe is screening surface. This increased screening area reduces inlet velocity thereby reducing fluid friction and allowing greater volume of fluid flow through the screen at a given pressure in the well. This reduced velocity reduces sand cutting and gives longer life to the screen.

The outside diameter of the Stancliff Well Screen is less than the diameter of the couplings and can be set through any pipe that will pass the coupling.

Ribs on pipe allow .061 of an inch for oil circulation and permit free flowing of oil into pipe, after straining through the wires. The ribs strengthen the pipe as much as perforations have weakened it.

Square wire is used to give greater life without "sanding," because sand must cut through entire width of wire before affecting screen.

The square wire is lugged from top to bottom at regular intervals, uniformly spacing and bracing wire at bottom as well as top.

By varying spacing-lugs on wire, we make strainer to screen any size sand . . . on any size or kind of pipe desired.

WRITE for FACTS
on Stancliff Patent Well Screen

HOWARD SMITH COMPANY
2412 RAILROAD AVE. at SAWYER ST.
HOUSTON TEXAS
Manufacturers of
WELL SCREEN-PACKERS
SET SHOES - TONGS

tools 5075 ft. Wooley-Jones et al's Pankenham 1, elev 2607 ft, sd 640 ft.

VAL VERDE COUNTY—Dyer Bros. et al's Wilson 1, elev 2115 ft, sd 2920 ft. Producers Oil Co. et al's Everett 1, sd 2450 ft. Valvert Oil Corp.'s Bassett 1-A, elev 2069 ft, sd 3760 ft.

WARD COUNTY — Atlantic & Delmar's Hayzlett 2, elev 2503 ft, top salt 727 ft, flowed 245 bbls oil after shot 90 qts. at 2470-2500 ft. Gulf Prod. Co.'s Hutchings 2, elev 2655 ft, top salt 1240 ft, top brown lime 2250 ft, making ¼ million ft gas, dr 2480 ft; O'Brien 5, elev 2681 ft, top salt 1273 ft, top brown lime 2460 ft, flowing oil by heads 2610-30 ft. Wristen Bros.. 1, dr 220 ft. Penn Oil Co. & Atlantic Oil Prod. Co.'s Bennett 1, dr 165 ft. Shipley Oil Corp.'s Hayzlett 2 and 3, lcns. Texas Oil Prod. Co.'s Redman 1-A, skid rig, td 960 ft.

WINKLER COUNTY—V. T. Bolin & Co.'s Brown 2, sd 500 ft. Liner Drlg. Co. et al's Campbell 1, sd 400 ft. Magnolia's Scarborough 2, top salt 1125 ft, dr 2340 ft. Shell & Llano Oil Co.'s Scarborough 6, top salt 1500 ft, show gas, fsh 2938 ft. Texas-Canadian Oil Co. & Superior's Kloh 1, elev 3243 ft, top salt 1490 ft, sd 4008 ft. Tidal Oil Co.'s Scarborough 1, elev 2911 ft, top salt 1190 ft, top lime 2690 ft, show oil and gas 2934-44 ft.

YOAKUM COUNTY — Bert Weekly Oil Corp. et al's Knight 1, elev 3693 ft, dr 2105 ft.

Discuss Transportation At Chicago June 20 to 21

New York.—The mechanical subcommittee of the American Petroleum Institute's General Committee on Railroad Transportation will meet at Chicago June 20, preliminary to the meeting of the general committee scheduled for June 21 The program includes discussion of railroad interchange rules, particularly Rule 44, Section 5, regarding damages to tank car centersills.

Fayette B. Dow, Washington counsel of the institute and chairman of the general committee, on June 1 anounced the meeting of that body. Sessions will begin at 10:30 a. m., daylight saving time, in the Stevens Hotel.

Organization of standing topical committees is among the activities listed on the docket, with H. W. Roe, of the Mid-Continent Petroleum Corporation, Tulsa, chairman of the committee on organization, presenting the committee report.

Engineering Societies to Meet at State College

State College, Pa.—Two national engineering societies will hold their annual meetings at the Pennsylvania State College this month. The oil and gas power division of the American Association of Mechanical Engineers, for the second consecutive year, will hold its national meeting at Penn State from June 24 to 27, in conjunction with the annual oil and gas power conference of the college. Prior to this meeting, the American Society of Refrigeration Engineers will be here for a two-day meeting from June 20 to 22.

Sun Company Picnic

Tulsa. — Sun Company and Twin State Oil Company held a joint picnic Saturday afternoon, June 15, in the Sand Springs Park. A very large number attended, including many out-of-town employes and their families. A dance was held that evening.

SOLVE
Sand Problems with Duo Pumps

For use where excessive sand is causing trouble with your present pump.

The Charles N. Hough Mfg. Company
FRANKLIN, PENNSYLVANIA

Oil Production By Gas Lift
(Continued from page 31)

is necessary in starting it should it go dead for any reason.

Methods of Starting Well

There are several methods used in starting wells. These methods may be roughly divided under the following types:

The gas may be injected into both casing and tubing simultaneously until a pressure is reached which insures the bottom of the tubing being uncovered. Then the gas is discontinued in the tubing, but maintained on the casing. The tubing is gently opened to the sump, and the pressure on the casinghead is allowed to fall gradually to the operating pressure. The tubing should not be bled at such a rate as to cause spasmodic flow, for this results in sudden changes of the pressure on the formation and con do no good to the well, and lengthens the time necessary to put the well on production. Where casing flow is intended, the procedure outlined here may be reversed.

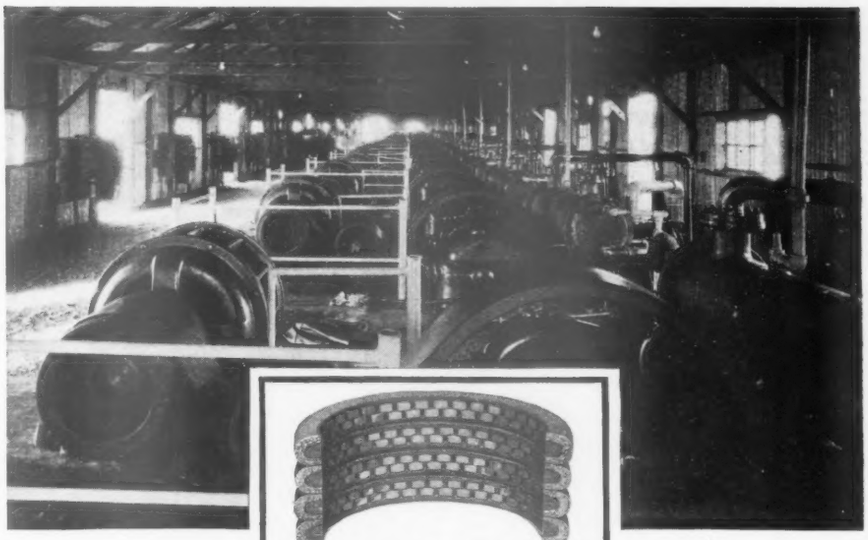
In another method the gas is injected into the tubing and allowed to escape through the oil in the annular space until it is sufficiently frothed to be of less specific gravity than originally, and then the gas is injected in the casing with the tubing slowly opened to the sump. This reversal of flow will fill the tubing with frothed fluid and enable the well to be kicked off at an appreciably lower pressure.

Or the gas may be injected into the casing and the pressure "bulled" through. If casing flow is desired, a reversal of this procedure is followed. Of course, this necessitates ample power. This method is only applicable to wells having sufficient rock pressure to withstand excessive pressures, for if insufficient rock pressure exists the gas will be dissipated into the sands and no flow will result.

The second of these two types is used in wells producing from loose sands, or wells having several producing sands, one of which has a low formation pressure, or where it is undesirable to force the fluid back into the formation because of free wax, asphalt, or slush.

The most successful and practical method in such a case is to inject the gas into the casing and, while the pressure is building up, the tubing is swabbed to remove the static head of fluid until the gas begins to bubble through the remaining fluid and flow is established. Should casing flow be desired the gas may then be reversed and injected into the tubing and flow established through the casing.

On wells having an extremely high static head and a relatively low pumping head, the kick-off has been at times accomplished by lowering the tubing by stages and establishing flow at each stage. By this method, where it is adaptable, the well may be put on production at a pressure only slightly higher than its operating pressure.



Cool-running compressors — satisfactorily packed with "V" Pilot Packing—in a gas lift station of Carter Oil Company in the Seminole area.

Cool-Running Compressors *With "V" Pilot Packing*

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BEAUMONT, TEXAS
Norvell-Wilder Hardware Co.
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Norvell-Wilder Hardware Co.
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Texas Rubber Specialty Co.
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Graft-Pelle Co.
PITTSBURGH, PA.
Argo Asbestos & Rubber Co.
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SHREVEPORT, LA.
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TULSA, OKLAHOMA
Mid-Continent Sales Service Company

ON air and gas compressors in lift work, "V" Pilot Semi-Metallic Packing gives long, dependable service, remaining tight under "kick-off" as well as flowing pressures, giving a perfect seal without friction or scoring, and permitting compressors to run cool.

On many compressors where from seven to twelve or more packing rings were formerly required, "V" Pilot Packing has demonstrated its ability to hold up to 1,000 lbs. pressure with four or five rings.

"V" Pilot Packing is equally efficient on many other types of equipment—Derrick engines, Slush Pumps (both steam and mud ends), Polish Rods on pumping wells, Oil Field Gas Pumping Engines (to seal the oil between crankcase and compressor chamber), and Pipe Line Pumps.

We are prepared to furnish molded sets to fit the rod and box of all types of compressors, pumps and other equipment.

Even if the service you are now getting from packing is considered satisfactory, it will pay you to investigate "V" Pilot and the possibilities it offers for still greater packing economy. Write today for complete information.

THE NEW JERSEY ASBESTOS CO.

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"V" PILOT PACKING

LEADERSHIP

Industrial leadership indicates both ability and willingness to meet the obligations of service.

The Tret-O-litE Process for recovering oil from petroleum emulsions has maintained leadership for so many years as to show that the "cut oil" or "B. S." problems of the industry must have been met in the most efficient and most economical manner possible.

Shrewd operators are aware of this leadership, and use the Tret-O-litE Process in order to be positive that their emulsions are handled with maximum profit.

PROCESS PATENTED

WM. S. BARNICKEL & COMPANY
Webster Groves, Mo.

Tret-O-litE

Reg. U. S. Pat. Off.

NEW EQUIPMENT, CATALOGS, BULLETINS, BOOKS

New Safety Starter

LINCOLN ELECTRIC COMPANY

An improved starter which starts a motor directly across the line has been recently placed on the market by the Lincoln Electric Company, Cleveland. The starter is controlled by the new Lincoln safety push button which is standard equipment with the across the line safety starter.

Installation of the starter is simple, with only four screws required to hold in place. Releasing two other screws permits the contractor panel to swing out thus making lead contacts easily accessible. A cover of the drop hinge type encloses the entire mechanism and permits installation of starters closely grouped, two inches clearance between starter boxes being ample for easy accessibility.

Lincoln Safety Starter

Contact points are protected by the wiping action which prevents pitting and by the cadmium plated steel shields which provide an instantaneous thermal and magnetic quench for the arcs. Arc chimneys are of heavy pressed magnesite which shield against currents higher than any to which the starter will ever be subjected. The relay armature has a cushion action for reducing wear. Likewise it is provided with replaceable bronze bearings and is actuated by a coiled spring.

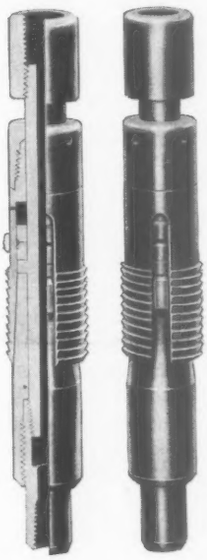
The Lincoln safety push button provides an additional safety factor to the Lincoln across the line starter in that the red stop button encircles and protects the green start button so that it is impossible to close the starting circuit unintentionally. The safety push button can be mounted on the side of the starter box or arranged for remote control.

"Houghton on Industrial Plant Lubrication" represents the first of a series of booklets on this subject prepared by the Houghton research staff of the E. F. Houghton & Company, Third American and Somerset Streets, Philadelphia. The first of the series is a neatly bound 56-page booklet of sepia enameled stock. It is fully illustrated, carrying photographs of industrial equipment dependent on correct lubrication.

Important subjects are carried, as "Lubricating of Bearings," "Effect of Temperature on Lubricants," "Relation of Correct Lubrication to Plant Efficiency," "Lubricating Theory," and "Lubrication of Air Compressors, etc."

Releasing Spear

GRAY TOOL COMPANY



Gray Spear

Gray Specialty Company, Houston, which was recently organized by Elsworth Gray, inventor and manufacturer of oil field tools for more than 15 years, has just announced its first product following starting of production in May. This product is an improved spear, the quick change release spear for overcoming fishing problems.

In the accompanying illustrations the new release spear is shown as it appears ready for the job and also displaying the inner workings of the tool.

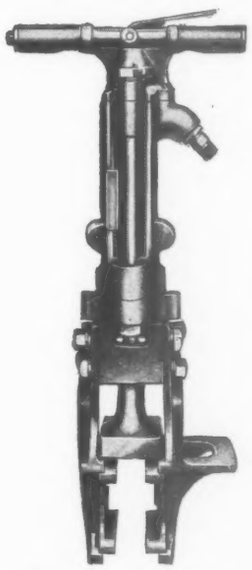
This spear was designed to eliminate the use of springs, which, the manufacturer found in former spears made by himself, continually lost their tension. It is designed to eliminate the hazards of using jars to accomplish a release. The third feature of the improved equipment is that threads are eliminated at such points where pulling and stretching causes parts to lock, thereby preventing the tool from releasing.

Further details may be obtained by writing the manufacturers, box 4174, Houston.

New Sheeting Driver

CHICAGO PNEUMATIC TOOL COMPANY

Chicago Pneumatic Tool Company, 6 East 44th Street, New York, has a new sheeting driver on the market which is designed primarily for driving wooden sheeting, or light steel sheeting, in trench work and excavations. It is constructed especially for service in such formations such as clay, sand or gravel.



New Sheeting Driver

This improved driver, CP-116, is illustrated here, and is essentially the CP-116 demolition tool with a special front end.

CP-116 is made to deliver a fast, powerful blow, and, depending on conditions, is slatted to do the work of eight to 10 men with mauls. Sheeting may be used more than once since a feature of the new tool is to prevent "brooming" of the end of the sheeting.

The sheeting driver has a low air consumption and "freezing" in the coldest weather is combatted by this method of driving. The piston is the only moving part, and, with its well balanced quality and light weight, only 105 pounds, stands out as a one-man tool.

The sheeting driver is furnished regularly with one guide plate with step, and one without, but the tool may be secured with two of either, if so specified. Adjusting plates provide for various sizes of sheeting—a 2¼-inch opening for two-inch sheeting, 1¾-inch for 1½-inch sheeting and 2¾-inch for three-

inch sheeting. The handle can be assembled parallel to the sheeting, or at right angles, as shown in the illustration.

By changing only the front end, the CP-116 sheeting driver may be converted into the corresponding demolition tool, thus serving two purposes. The makers advise the use of separate tools, however, if there is an appreciable amount of both classes of work to be done at the same time.

Further information concerning this sheeting driver may be obtained through corresponding with Chicago Pneumatic Tool Company at the address given above.

BRYON JACKSON COMPANY ENTERS OIL TREATING FIELD

Byron Jackson Company announced early in June the purchase of a substantial interest in Petroleum Rectifying Corporation, a successor of Petroleum Rectifying Company of California which manufactures and licenses processes for electrical extraction of water from crude oil emulsion.

The sales organization of Byron Jackson Company will enter upon a program of extending the use of the Petroleum Rectifying Corporation's dehydrating processes in leading fields throughout the world.

Purchase of this interest in Petroleum Rectifying Corporation follows the recent acquisition of the business of Dunn Manufacturing Company, manufacturer and distributor of a number of drilling and production tools. It also follows in line with the recent policy of Byron Jackson Company to expand its activities in the oil production field, a program resulting in several mergers of large proportions this year.

Paul T. Putnam, sales manager of production equipment, W-K-M Company, Houston, was scheduled to leave California early this week for Texas fields after spending three weeks on business in the West. Putnam drove from Houston to Los Angeles, accompanied by B. R. Emrick, technical adviser over drilling and producing for Burmah Oil Company, Ltd. Mr. Emrick, who was scheduled to return from California by aeroplane and sail from New York early in June, has been visiting fields in this country for two months while on a six months trip around the world.

BOOK ON GEOPHYSICAL PROSPECTING

"Geophysical Methods of Prospecting, Principles and Recent Successes," by Dr. C. A. Heiland, professor of geophysics at the Colorado School of Mines, was released by the department of publication at this institution. The book deals with geophysics as a means of locating ores and oil deposits. A number of maps have been included showing areas where geophysical prospecting has been done in the United States, and indicating what methods were used. Various tables show the results of the work done and the successes proved by actual mining and drilling. In addition to these maps, there is one of the Gulf Coast giving complete information regarding the salt domes located in the area, both with and without the aid of geophysics. In each case the successful method has been indicated, and it is shown whether or not the dome is productive.

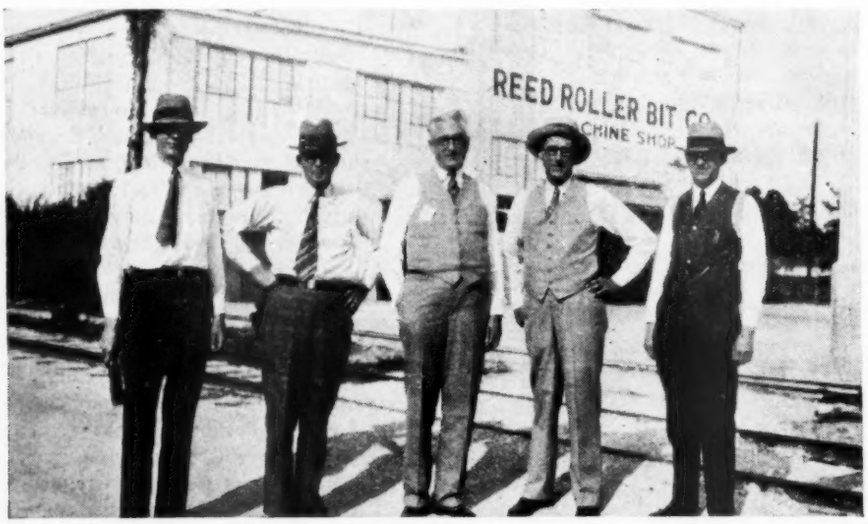
The author has included in this quarterly publication a statistical section listing all geophysical prospecting companies and consultants; all manufacturers of geophysical instruments; average prices for geophysical surveying, counties in the United States, provinces in Canada, and states in Mexico where geophysical surveys have been made.

The book is available through the Colorado School of Mines, Golden, Colorado for $1.00.

GULF COAST REPRESENTATIVE

Clyde Ellis, 717 Second National Bank Building, Houston, has completed arrangements with the Gray Specialty Company of Houston to handle the distribution of the company's oil field equipment in the Gulf Coast territory, including South Louisiana and Southwest Texas. Mr. Ellis, who has been in the oil field equipment business for many years, having been connected with Continental Supply Company for 12 years, will put a salesman in the field in the near future.

Gray Specialty Company, owned and operated by Ellsworth Gray, who has invented and produced more than a dozen specialty drilling and fishing tools, was recently organized and has been on production since early in May. Establishment of this concern followed the selling of his interests by Mr. Gray in the Gray Tool Company of Houston, which he organized a number of years ago. The new company is already manufacturing a releasing rotary spear, a combination casing head and blowout preventer and a releasing overshot. Other special tools are designed and will be produced within the next few months.



Prominent foreign and domestic oil men on a tour of the Gulf Coast and Mid-Continent fields and manufacturing plants are shown here as the guest of W. L. Childs of the Reed Roller Bit Company.. Reading from left to right they are: Joseph H. Holmes, petroleum engineer with the Near East Development Corporation; H. M. Macomber, general superintendent of production of the Turkish Petroleum Company, Iraq; Mr. Childs of the Reed Roller Bit Company; Walter Elliott, general superintendent of production for the Shell Oil Company in California, Los Angeles, and Ben B. Cox, geologist with the Near East Development Corporation

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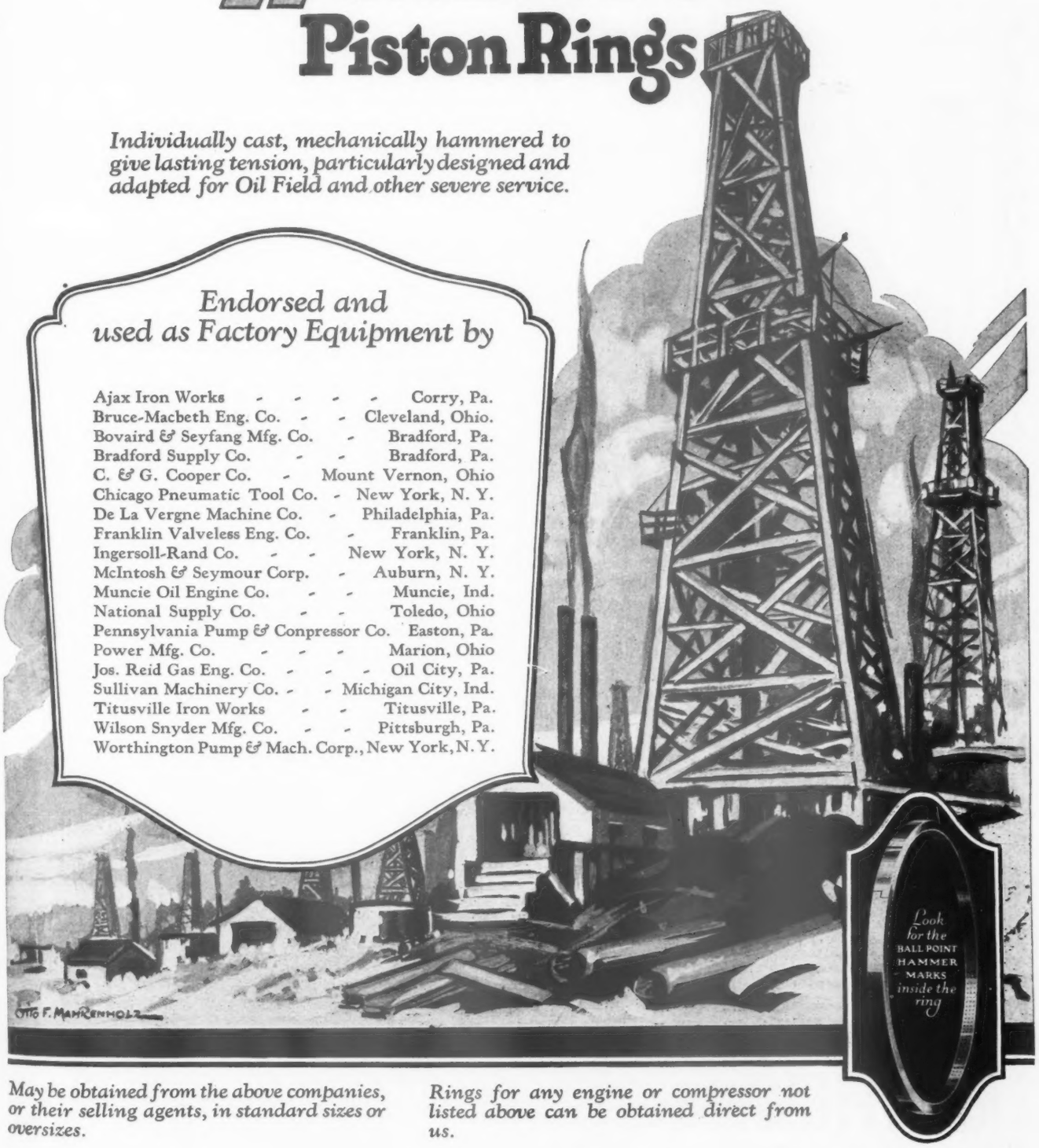
Fred E. Cooper of Tulsa, special oil field representative and winch developer of the Rumely oilpull tractor, is on a tour of the Panhandle and West Texas fields in company with A. C. Frampton district manager of Southern Oklahoma and the Panhandle of Texas.

W. P. Turner, president of the Oil Country Specialties Manufacturing Company, Coffeyville, Kansas, left June 8 for California, where he will oversee production work in the Hynes plant. He is expected to be in California about 90 days.

C. A. Anderson has recently been appointed as sales manager of the Ford Chain Block Company, and will maintain headquarters at the general offices and works located at Second and Diamond Streets, Philadelphia. This company, manufacturer of "Tri-Bloc" chain hoists, worm gear hoists, differential hoists and eye beam trolleys, maintains branches in Chicago, New York, New Orleans and Pittsburgh.

American Hammered Piston Rings

Individually cast, mechanically hammered to give lasting tension, particularly designed and adapted for Oil Field and other severe service.



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Ajax Iron Works	Corry, Pa.
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Bradford Supply Co.	Bradford, Pa.
C. & G. Cooper Co.	Mount Vernon, Ohio
Chicago Pneumatic Tool Co.	New York, N. Y.
De La Vergne Machine Co.	Philadelphia, Pa.
Franklin Valveless Eng. Co.	Franklin, Pa.
Ingersoll-Rand Co.	New York, N. Y.
McIntosh & Seymour Corp.	Auburn, N. Y.
Muncie Oil Engine Co.	Muncie, Ind.
National Supply Co.	Toledo, Ohio
Pennsylvania Pump & Conpressor Co.	Easton, Pa.
Power Mfg. Co.	Marion, Ohio
Jos. Reid Gas Eng. Co.	Oil City, Pa.
Sullivan Machinery Co.	Michigan City, Ind.
Titusville Iron Works	Titusville, Pa.
Wilson Snyder Mfg. Co.	Pittsburgh, Pa.
Worthington Pump & Mach. Corp.,	New York, N. Y.

May be obtained from the above companies, or their selling agents, in standard sizes or oversizes.

Rings for any engine or compressor not listed above can be obtained direct from us.

The American Hammered Piston Ring Co. Baltimore, Md.

SPEED

of the
Appleman Gumbo
Bit drilling more hole
at less cost for big
companies every day

(Patent Applied For)

No Choking Up

Note that water courses lead direct to cutting edge. This design has accomplished a maximum cooling effect. The cuttings are rapidly broken up and washed away in solution thus obviating choking up.

Cutting Edges Self-Sharpening

A principle in the design is that the blades are formed concavely favoring cutting edges for both bottom and side of hole. Attained by hard facing, permitting wear on back to retain cutting edge. This factor contributes greatly to the speed of the Appleman Gumbo Bit.

Names of prominent users will be mailed upon written request.

Write for illustrated folder.

B.K.APPLEMAN
BEAUMONT, TEXAS

Squeaks from the Bull Wheel

"Stop sniffling little boy. Can't you do something with your nose?" the austere old lady asked, on the crowded street car.

"Yes'm," returned the lad politely, "I can keep it out of other folks' business."

"I do hope you keep your cows in a pasture," said Mrs. Newlywed, as she paid the milkman.

"Yes, madam," replied the milkman; "of course, we keep them in a pasture."

"I'm so glad," gushed Mrs. Newlywed. "I have been told that pasteurized milk is much the best."

Why, Grace, how in the world did you get so messed up while riding?

I rode in the rumple seat.

"Do you know that girl?"

"Oh, just a nodding acquaintance?"

"What do you mean, nodding?"

"Nodding doing."

"You don't love me as much as you used to. Haven't I always played fair with you?"

"Yeh, you're fair, but I like 'em warmer."

Gaby: Bill's new car is awfully cute.

Leta: Yes, you ought to see it play dead on a lonely road.

An old Dutchman, returning to Holland was asked by a friend what in his estimation was the strangest thing he had noticed, and he replied, "The United States has many wonderful things but the strangest is a drink called the cocktail—and here is how they make it: They put in whiskey to make it strong, then water to make it weak; gin to make it hot and ice to make it cold; lemon to make it sour, sugar to make it sweet; then they say, "Here's to YOU!" and drink it themselves.

Billy the Kid, the famous Arizona desperado, killed 19 men before he was 21.

What kind of a car did he drive?

"Sir," said the maid, quite haughtily, "either take your arm from around my waist or keep it still. I am no ukulele."

"What's the idea of that set of traffic lights over the mantel?" inquired the young man calling on the daughter.

"It's father's idea, she explained. "The green stays on until 11:30, then he flashes on the amber, and at 12 the red. And you know," she added, "father is a traffic cop."

Two pickpockets had been following an old man whom they had seen display a fat wallet. Suddenly he turned off and went into a lawyer's office.

"Good lor," said one; "a fine mess. Wot'll we do now?"

"Easy," said his mate, lighting a cigarette. "Wait for the lawyer."

"Your wife is talking of going to France this summer. Have you any objections?"

"No, certainly not. Let her talk."

"Say, mister," said a little fellow to a next door neighbor, "are you the man who gave my brother a dog last week?"

"Yes."

"Well, ma says to come and take them all back."

Vicar—And what parable do you like best, my son?

Boy—The one about the multitude that loafs and fishes.

The Dowager—What has become of Mr. Gadabout? He used to be quite a society lion.

The Old Tea Hound—He doesn't go out any more. He married a society lion tamer.

At one of the western camps was a young rookie who, during the first few days of his sojourn, was the victim of so much guying that he doubted all men and their motives. One night while he was on guard the tall figure of one of the officers loomed up in the darkness before him. "Who goes there?" he challenged.

"Major Moses", replied the officer.

The rookie scented a new joke. "Glad to meet you, Moses, old top," he said cheerfully, "Advance and give the Ten Commandments."

A man was standing disconsately on a station platform. On being asked by a friend why he looked so miserable, he replied, "I've missed my train—and by half a minute."

"Good heavens!" said his friend. "Cheer up! Anyone would think, to look at you, you had missed it by half an hour."

It was visiting day at the insane asylum. One of the inmates imagined himself to be an artist, and he was busily engaged in dabbling at an empty canvas with a dry brush. A visitor, wishing to humor him, asked what the picture represented.

"That," said the nut, "is a picture of the Israelites being pursued through the Red Sea."

"Where is the sea?"

"Why, that's rolled back to allow the Israelites to pass."

"Where are the Israelites?"

"They've just gone by."

"Then where are their pursuers?"

"Oh, they'll be along in a minute."

"What made you beat up that guy?"

"He insulted my girl."

"Why, all he said was that she danced like a zephyr."

"I thought he said heifer."

Feel the Spring

It's the marvelous spring and snap that B. & B. Drilling Lines give to the tools that makes them make hole so fast.

But it's the unusual quality in the wire used in making these superior lines that makes them make hole cheaper. You'll be glad you tried B. & B. Patentsteel, Extra Strong or Cast Steel Lines.

Write for Catalog 41.

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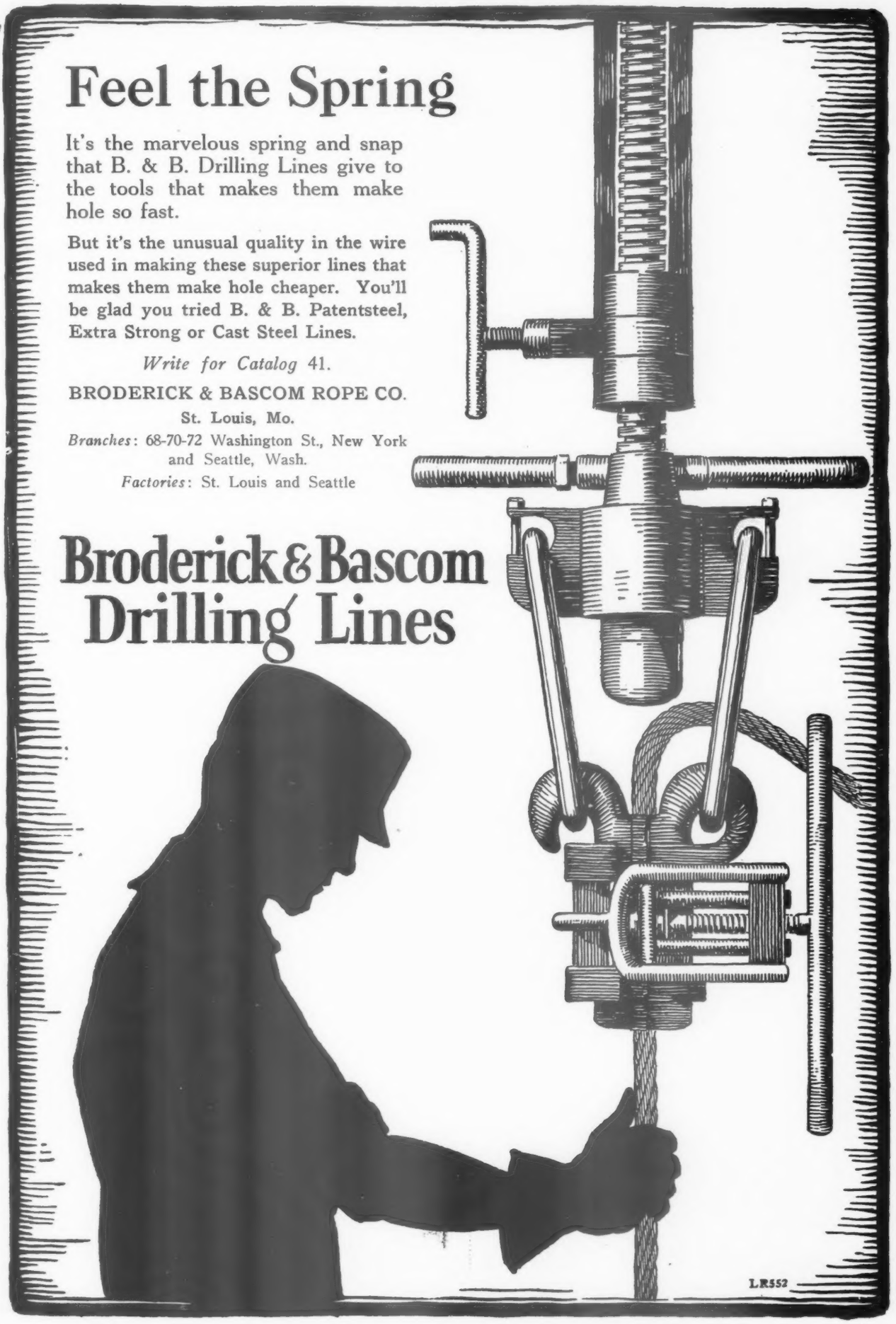
St. Louis, Mo.

Branches: 68-70-72 Washington St., New York and Seattle, Wash.

Factories: St. Louis and Seattle

Broderick & Bascom Drilling Lines



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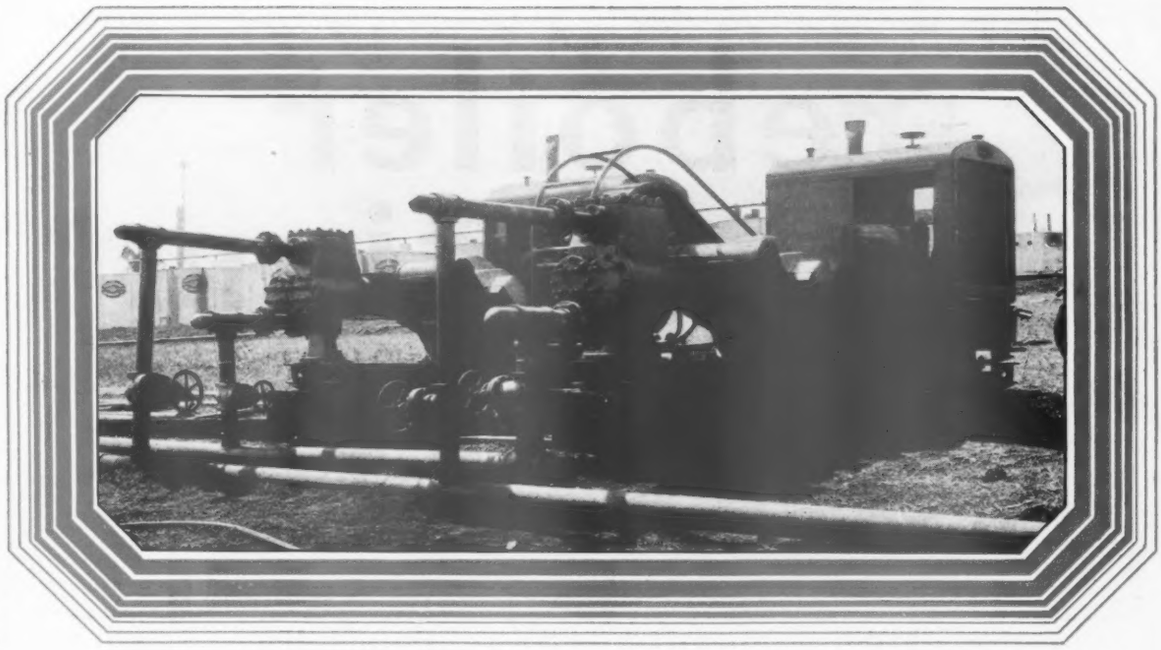

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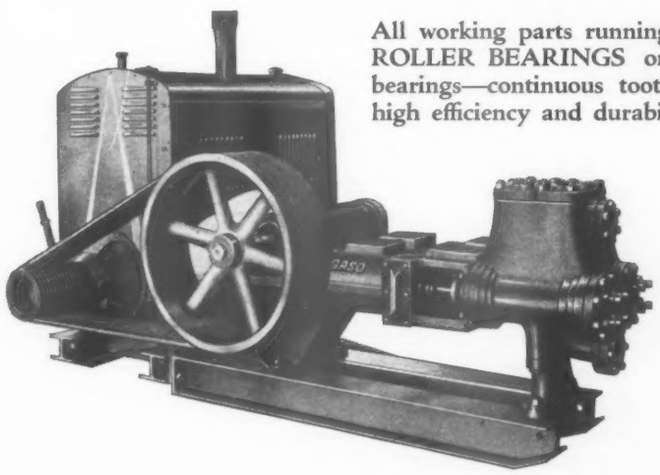
For Large Capacities and High Pressures

The Gaso Fig. 710 Enclosed Power Pump—with V-Rope drive from a Buda 85 H.P. gas or gasoline engine—mounted on H-beam skids for easy transportability—constitutes an ideal unit for semi-permanent and permanent pipe line stations. Interchangeable liner fluid end gives capacities from 54 barrels per hour at 1400 pounds working pressure to 502 barrels per hour at 300 pounds pressure.

All working parts running in an oil bath—TIMKEN TAPER ROLLER BEARINGS on pinion shaft—babbitt lined main bearings—continuous tooth herringbone gears—are factors in high efficiency and durability.



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GASO PUMPS
for every oil industry need

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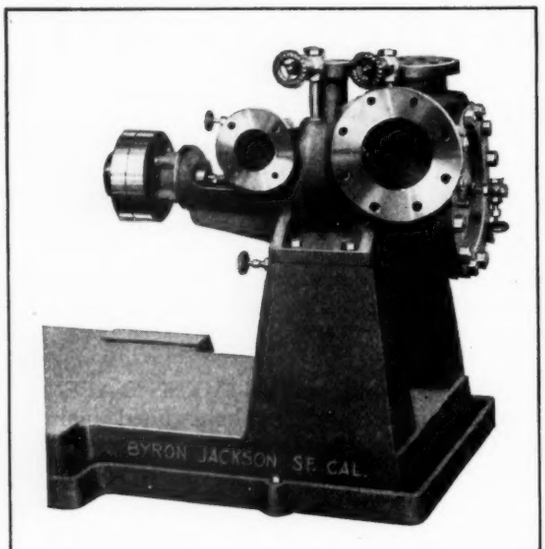
PUMPS



PUMPS

The Byron Jackson Centrifugal Reboiler Circulation Pump is evidence of the way this company solves the special pumping problems of refineries. This unit consists of two pumps in one case with a single stuffing box. Case has only one circular joint kept tight by numerous stud bolts and metallic gasket, supported along centerline of shaft to prevent temperature misalignment. Rotating element is removable without disturbing pipe connections or driver.

This company builds a complete line of single and multi-stage pumps to fill all refinery requirements; centrifugal oil pipe line and water pumps for every service.

SINCE 1872

BYRON JACKSON CO.

Factories: BERKELEY, Los Angeles, Visalia, Calif.

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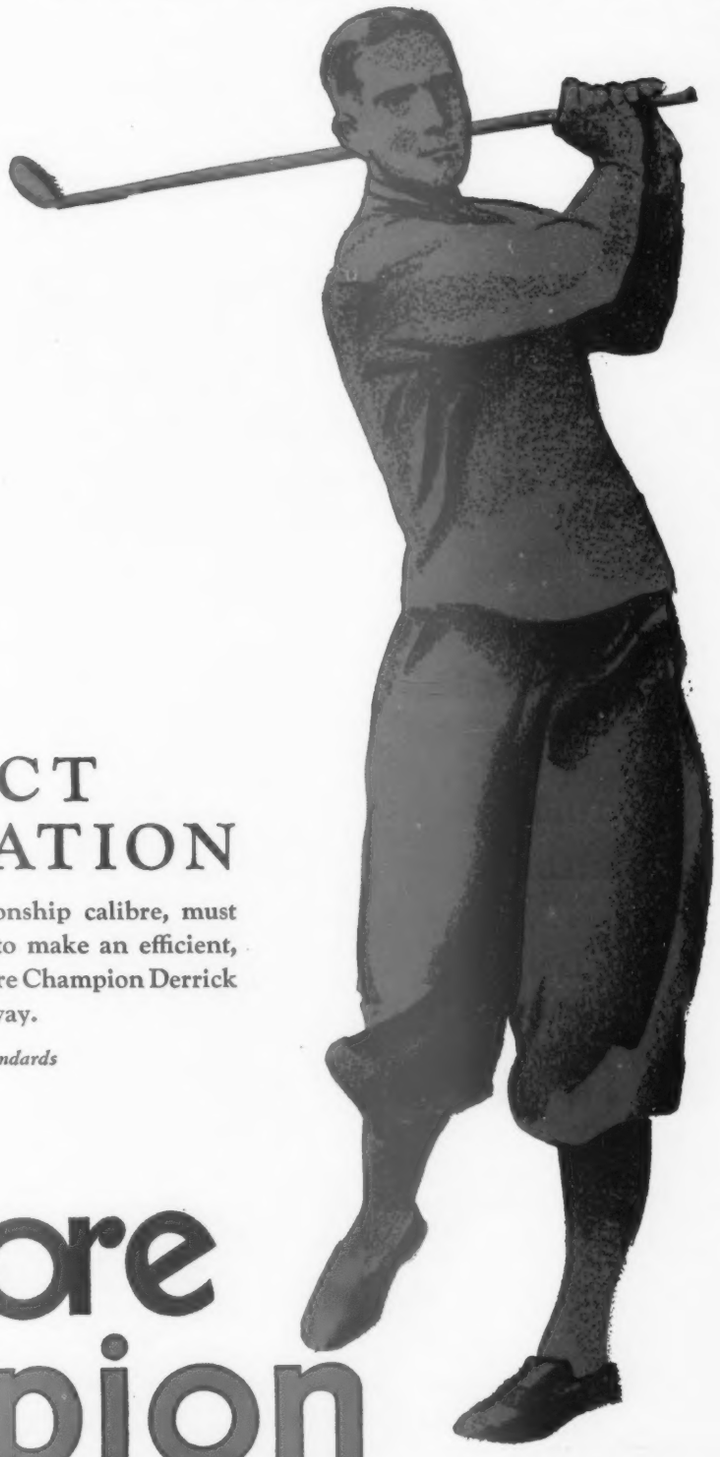
CENTRIFUGAL PUMPS FOR EVERY SERVICE

AMONG CHAMPIONS



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A derrick, to be of true championship calibre, must have every part so coordinated as to make an efficient, smoothly operating unit. The Moore Champion Derrick is designed and built in just that way.

Conforms to A. P. I. Standards

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LARGE O. D. PIPE

LINE PIPE

DRIVE PIPE

DRILL PIPE

Sizes ⅛ inch to 24 inch O. D.

ETNA

A Letter from Harry G. Nye

To the Oil Men of the U. S. A.

Fellow Citizens:

What has become of the old-fashioned preacher who used to preach these curse-of-gold sermons when we were boys? He made the village banker look like a bum, and the village bum like a banker. Making money was the work of the devil, and maybe the parson was right, because you certainly had to work like the devil to make it.

Well, I don't know what has become of the old-fashioned preacher, but I know where the new-fashioned preacher is. He's out at the country club playing pasture pool with his broker, or he's attending the weekly meeting of the Eatfast Club, and joining the gang in caroling the fact that "Old MacDonald had a farm, e-i, e-i, o."

For the world has about decided that making money is not such a terrible crime, if a man makes it honestly, which is the easiest way to make it there is. The world thinks more of a sinner who pays his debts than of some psalm-singer who is behind with his rent. Money may be a sin, but standing off the creditor is no virtue.

I know a lot of men who have made money, bankers, and movie actors, and prize-fighters, and a few men who have made a lot of money, most of them waiters, and I never knew a man yet who was making it for himself. He was working like the dickens so his kids would never have to work at all. A fool idea, but give him credit for it.

Most men want to so live that when their summons comes to join the innumerable caravan, the check from the trust company will keep right on coming every month just the same. If you don't think there is a lot of unselfishness in the world, consider the amount of life insurance that is carried.

And if I should ever even remotely suggest that an order for pipe-tools would help right now, I hope you will not think I mean help me. I'm thinking about the factory payroll and the family bankroll. And then think how it will help *you*—Nye Tools work so much faster and easier and make so much money for the man who buys them.

Not hinting or anything,

HARRY G. NYE.

Otherwise Known As

THE NYE TOOL & MACHINE WORKS

4120-30 Fullerton Avenue

Chicago, Ill.

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NYE

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Made to Fit All Standard Makes of Pipe Cutters

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Smooth Edge

Nye cutter wheels are made from the highest grade tool steel, and are hardened and tempered in oil. Blades about 1/16th of an inch thick and straight from hub to cutting edge. Cut with one-third the time and power required by the old type wheels. And also they are—

ABSOLUTELY GUARANTEED

The rugged construction and few working parts account for the simplicity and durability of these Nye Receding models. They do the work easily and efficiently.

No. 1 Nye Receding Pipe

Threader, complete ....$9.60 net
West of Rocky Mountains $10.80

NYE (Toledo Type) Chasers Fit Nos. 1, 1A and 2 NYE (Toledo Type) Stocks

Each set is guaranteed in every particular. Will cut much easier than other similar dies.

No. 1, 1″ to 1½″..$ .75 per set net
No. 1, 2″ .....$1.25 per set net
No. 2, 2½″ to 4″..$3.60 per set net

The No. 1A is the same as the No. 1, except that it is equipped with a ratchet for work where space is restricted.

No. 1A Nye Receding Pipe

Threader, complete ....$12.00 net
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Hazard "Olympic" rotary line is being used on both rigs illustrated. Each line has previously completed another well.

The line used on Mead Bros., Inc., rig has drilled over 10,000 feet. The other line is close to that mark. Both lines are in excellent shape.

Records like these are the best evidence of the low cost, efficient service you can expect from Hazard Lines. Be sure you specify Hazard "Olympic" for your next rotary operation.

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There's a Hazard line for every oil country service

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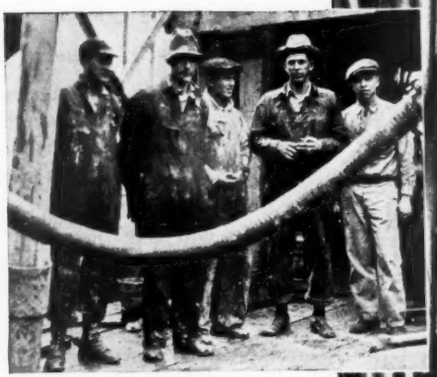
FLEX-SET PRE-FORMED ROTARY LINES
CASING LINES SUCKER ROD LINES
SAND AND MANDREL LINES



Dailey Markham Drilling Co., rig on Harjoshie No. 4, Gypsy Oil Co., Mission Pool, using 1"x1250' Hazard Olympic Rotary line. Also the second well for this line.
Earl Bridges, Driller — M. L. Beaver, Roughneck
J. G. Copeland, Roughneck — Tom Riley, Roughneck
Jack Campbell, Roughneck

One of Mead Bros., Inc., rigs on J Neal No. 4, Minnahoma Oil & Gas Co., in the Mission pool, using a 1" x 1250' Hazard Olympic Rotary line. This is the second well for this line.
Jean Lambert, Driller — J. E. Jones, Roughneck
Fred Velvin, Roughneck — C. A. Sneed, Roughneck

Both lines supplied by The Bovaird Supply Co.

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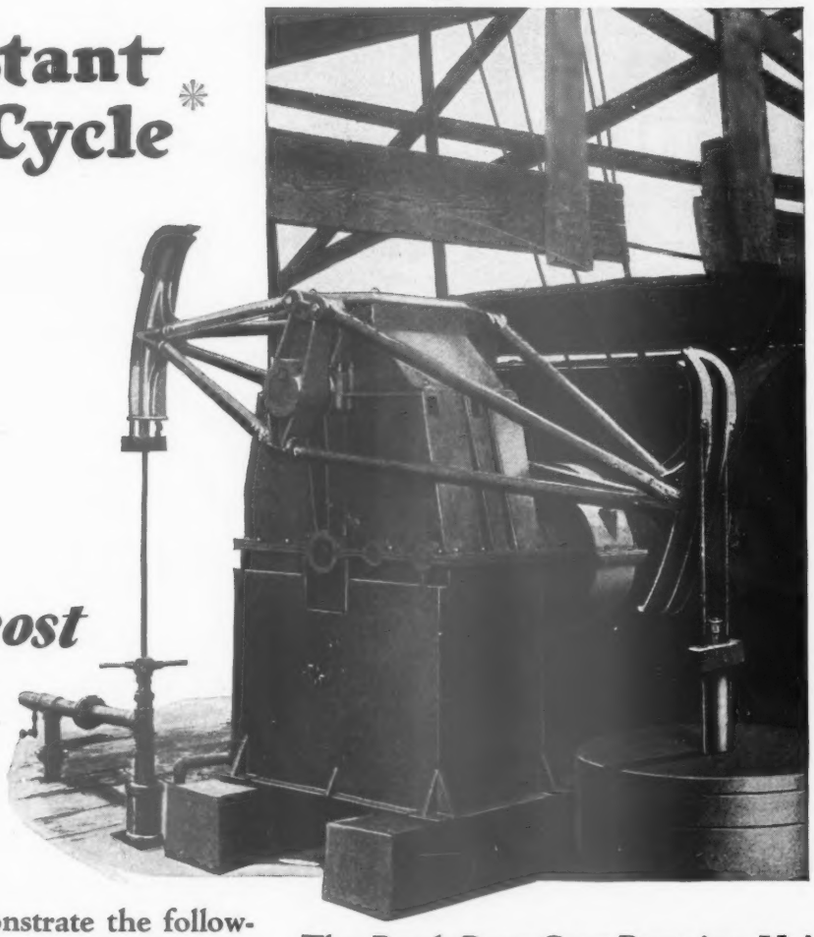

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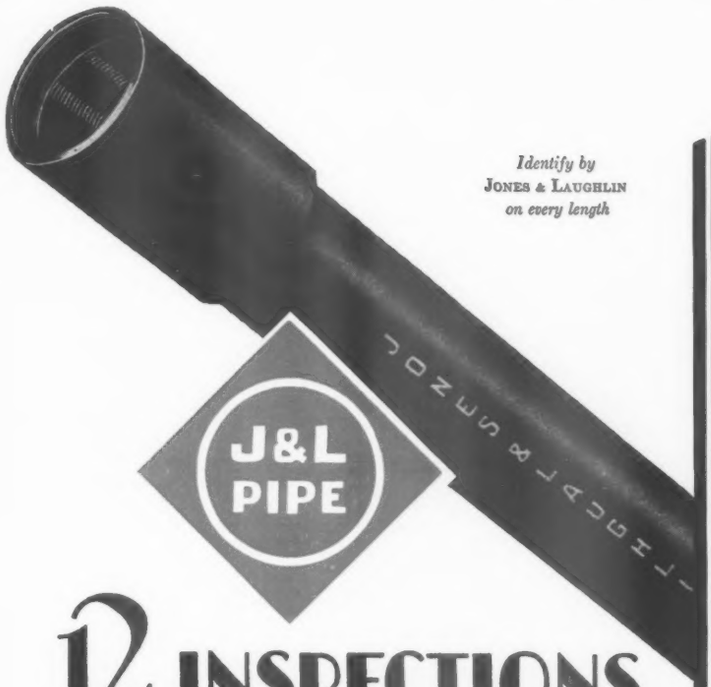
HALLIBURTON

OIL WELL CEMENTING COMPANY

DUNCAN, OKLAHOMA



Identify by
JONES & LAUGHLIN
on every length

12 INSPECTIONS INSURE UNIFORMLY HIGH QUALITY

J & L's adequate resources, ownership control of each process from ore mining to pipe making, nearly 80 years of experience in iron and steel making, and rigid inspection through each step of manufacture, are your guarantees that every length of J & L Seamless Casing you order is as nearly perfect as seamless casing can be made. Beginning with chemical and physical tests of raw materials, iron ore, coke and limestone (from J & L's own mines and quarries), inspection on J & L Seamless continues without interruption until the twelfth and final checking is made as the pipe is loaded for shipment.

In addition to the twelve tests and inspections (listed at right) a milling machine is kept busy constantly machining out samples for pull tests to insure tensile strength safely within requirements of the trade. Drillings are also taken during mill operations to be analyzed for chemical composition, and samples are microphotographed frequently to check grain structure.

Oil men declare: "There's no better Seamless made than J & L."

INSPECTIONS OF J & L SEAMLESS

1 Chemical tests of raw materials made at the mines and quarries, also before charging into blast furnaces.

2 Thorough analysis of pig iron produced by blast furnaces and metallurgical inspections as pig iron is made into steel in open hearth furnaces.

3 Chemical analysis for composition as steel is poured from open hearth furnaces into ingot molds.

4 Ingots rolled into blooms under temperature control.

5 Blooms pickled in strong acid to bring out defects. Inspectors pass blooms only after visible defects have been chipped out with pneumatic chisels.

6 As seamless tubes come from the straightener, inspectors scrutinize both outside and inside surfaces with the aid of specially designed lamps.

7 Ends trimmed; then pipe is inspected for wall thickness and correct outside diameter and roundness.

8 Pipe threads checked with certified gages and second inspection made for flaws, to insure clean cut accurate threads of proper pitch and taper.

9 Couplings as produced in our mills are closely inspected for correct tapping, threads accurately gaged for pitch and taper and checked on specially designed machines for alignment.

10 All items of previous inspections rechecked on testing benches, and stencil marks applied.

11 Each length given hydrostatic pressure test before rust-resisting coating is applied and pipe is delivered to shipping platform.

12 Final inspection of each length as it is loaded for shipment.

J&L STEEL

JONES & LAUGHLIN STEEL CORPORATION

Jones & Laughlin Building
PITTSBURGH - - PENNSYLVANIA

As Good as Good Steel can make it

The name "BETHLEHEM" is marked at intervals on every length of Bethlehem Steel Pipe—assurance that Bethlehem Pipe embodies the same high quality found in other Bethlehem Products.

One of the first requirements for making good pipe is good steel. The steel used in the manufacture of Bethlehem Steel Pipe is made under the supervision of skilled metallurgists, especially for this purpose.

The manufacture of Bethlehem Steel Pipe, from the mining of the ore, through the finishing operations, is controlled by one organization. Each step in the conversion of the steel into pipe is carried out under the supervision of men thoroughly experienced in pipe manufacture. The inspections and tests are most critical, so as to make certain that each length of pipe shipped conforms in every way to the Bethlehem standard.

When you purchase Bethlehem Steel Pipe, you are assured of pipe of uniform structure, and of high quality—pipe that will meet all requirements.

BETHLEHEM STEEL PIPE

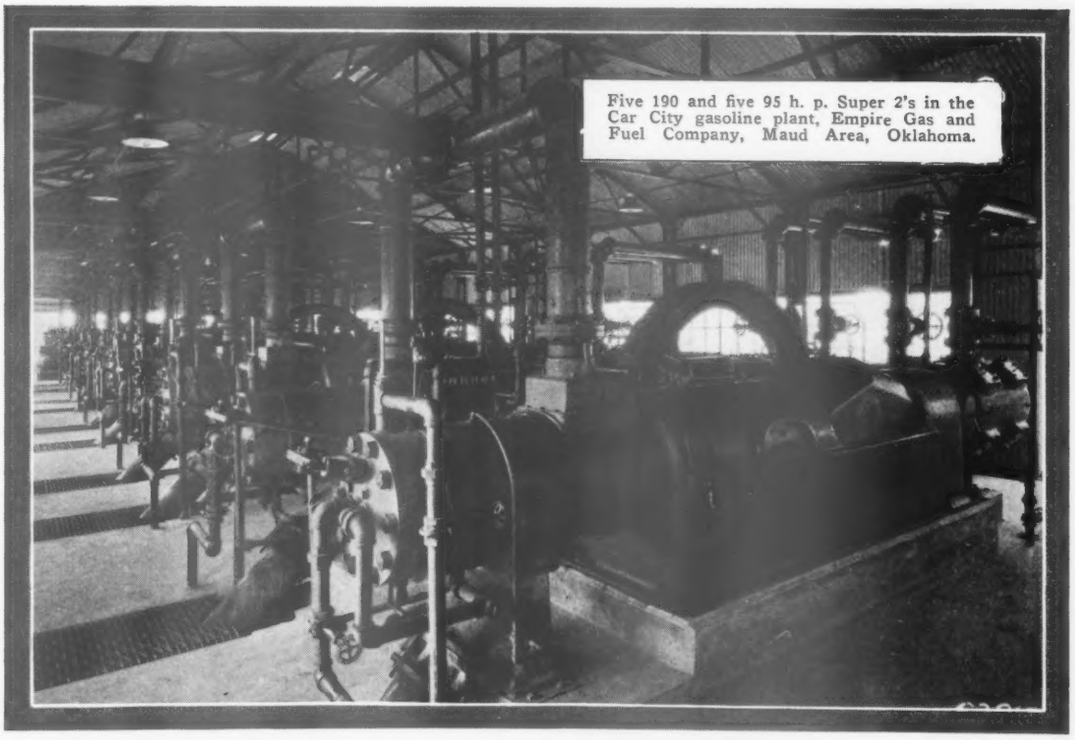
BETHLEHEM STEEL COMPANY

General Offices: BETHLEHEM, PA.

District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Detroit, Cincinnati, Chicago, St. Louis, San Francisco, Los Angeles, Seattle, Portland, Honolulu

Bethlehem Steel Export Corp., 25 Broadway, New York City
Sole Exporters of our Commercial Products

Bethlehem maintains at Los Angeles, Cal., and at Houston, Tex., well-assorted stocks of line pipe, ready for immediate shipment. Both threaded and coupled and plain-end pipe are included in these stocks.



Five 190 and five 95 h. p. Super 2's in the Car City gasoline plant, Empire Gas and Fuel Company, Maud Area, Oklahoma.

One Installation of "SUPER 2s" Leads to another

It is significant how often one installation of CLARK "Super 2"-cycle compressors leads to another. Operators who have learned at first hand the remarkable fuel efficiency of "Super 2" design, and who have kept records of maintenance costs on these durable machines, almost invarably specify "Super 2's" when new installations are planned.

Ask for data explaining the durability of "Super 2" design and showing how the "Super 2" can operate on 1-3 less gas than ordinary 2-cycle compressors.

Compressors and Gas Engines

CLARK BROS. COMPANY Olean, New York

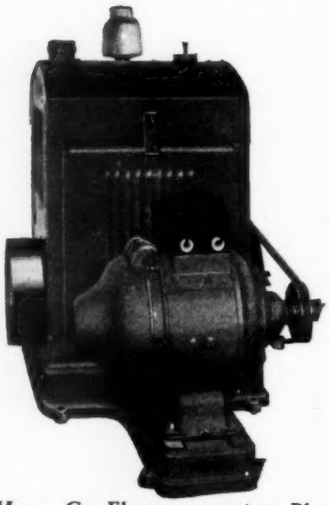
Export Office 150 Broadway, New York City

Branches and Warehouses
125 W. First St., Tulsa; McCamey and Sweetwater, Texas; Artesia, New Mexico

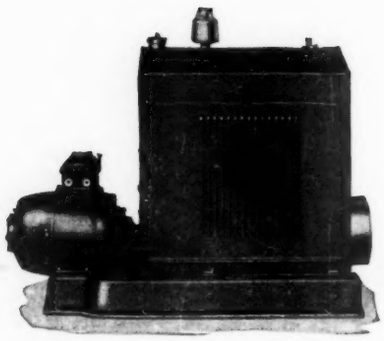
California
Smith, Booth, Usher Co., 228 S. Central Ave., Los Angeles

CLARK

The MOON
handles your Lighting Job from every angle



Moon Gas-Electric Lighting Plants
Belted Type
1, 1½ and 2¼ KW



Moon Gas-Electric Lighting Plants
Direct Connected
1½, 2¼, 3, 4, 5 and 7½ KW

THE MOON Gas-Electric units are more than just "lighting plants." They are a complete, self-contained, dependable source of electric power, capable of handling your lighting job and many other side jobs as well.

Unusual flexibility is obtained by the generous amount of surplus engine power which is provided. For instance, if you want to dress a bit at night, simply belt your blower to the auxiliary pulley on the engine. There is plenty of extra capacity to take care of this without disturbing your lights.

When lights are not required, the generator is easily disconnected from the engine, and then the entire capacity of the engine is available for other purposes.

Can be equipped to operate on either gasoline or natural gas. Built in two types, the belted and direct-connected, there is a style and size for every kind of oil country job.

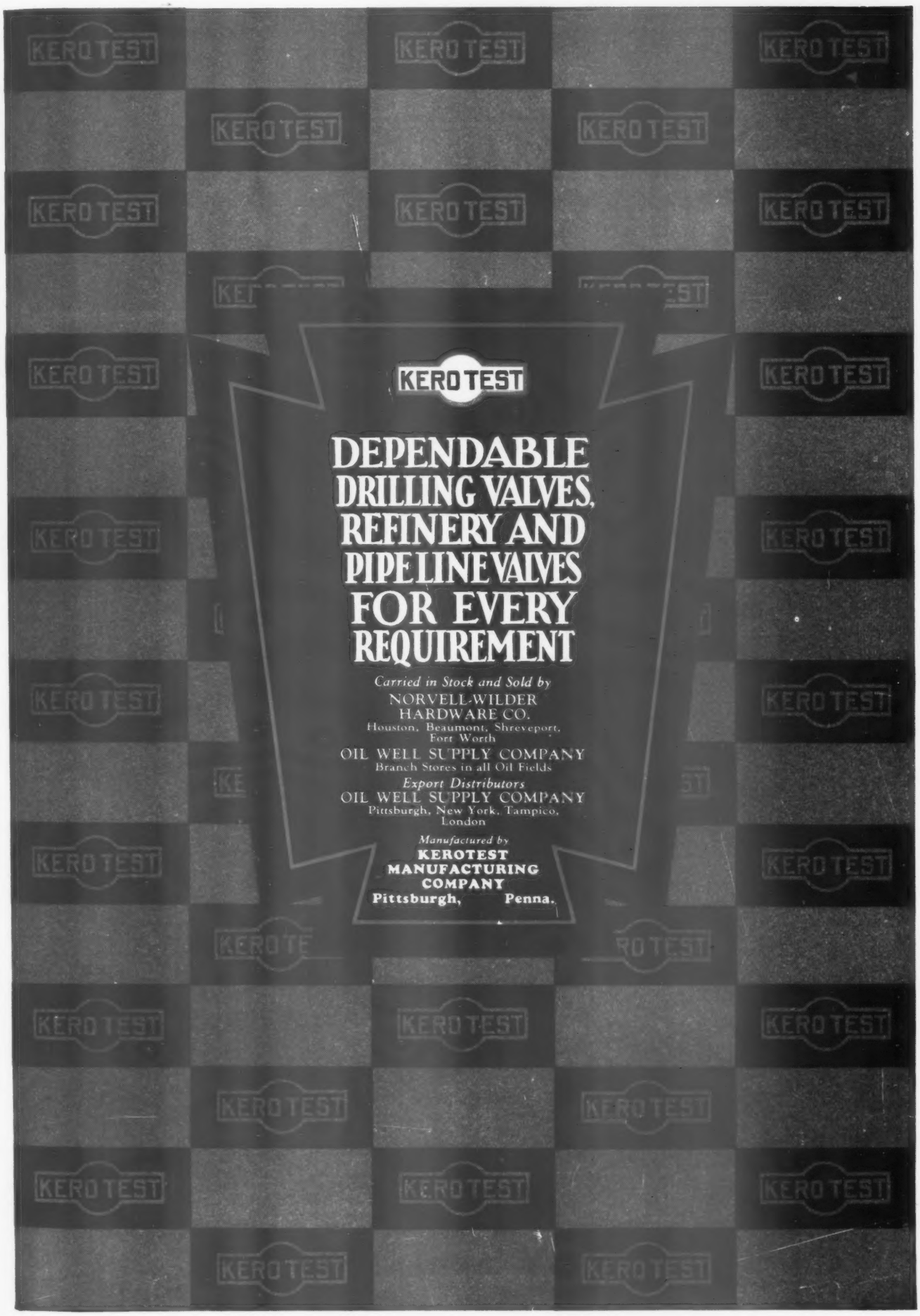
We carry Moon Generators in stock for your immediate service

Republic Supply Company

GENERAL OFFICES - HOUSTON, TEXAS

OIL AND GAS WELL SUPPLIES

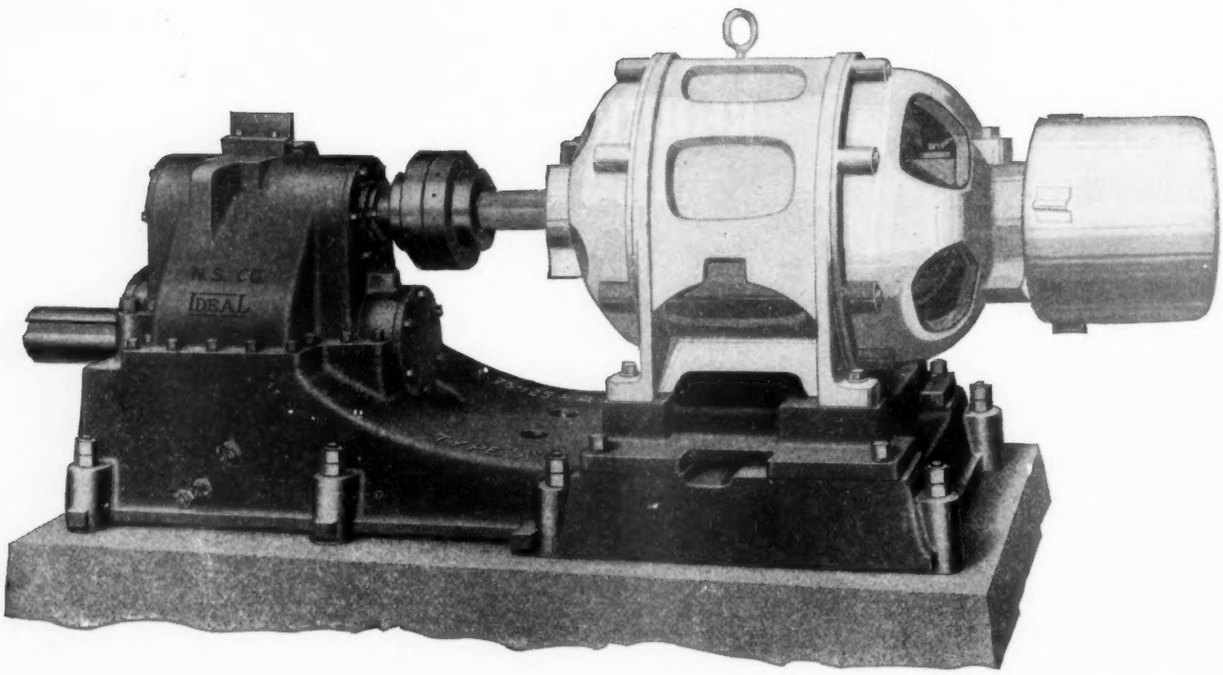
ROTARY AND CABLE TOOLS


KERO TEST
DEPENDABLE DRILLING VALVES, REFINERY AND PIPE LINE VALVES FOR EVERY REQUIREMENT
Carried in Stock and Sold by
NORVELL-WILDER HARDWARE CO.
Houston, Beaumont, Shreveport, Fort Worth
OIL WELL SUPPLY COMPANY
Branch Stores in all Oil Fields
Export Distributors
OIL WELL SUPPLY COMPANY
Pittsburgh, New York, Tampico, London
Manufactured by
KEROTEST MANUFACTURING COMPANY
Pittsburgh, Penna.

IDEAL
ROLLER BEARING REDUCTION GEARS
TYPE "A"

FOR ELECTRIC POWER SERVICE

75—125	H. P.	Rotary Drilling
25—65	H. P.	Cable Tool Drilling, Heavy Duty Pumping and Cleaning Out with Standard Rig
20—50	H. P.	Heavy Duty Pumping and Cleaning Out with Standard Rig
15—35	H. P.	Light Duty Pumping and Cleaning Out with Standard Rig



Descriptive Bulletin
No. 16UA
Free On Request

THE NATIONAL SUPPLY COMPANIES

Gar Wood in Miss America VII did the seemingly impossible when he created a record of 94 miles per hour.

MILLED GROOVE, TOO
Does the Seemingly Impossible

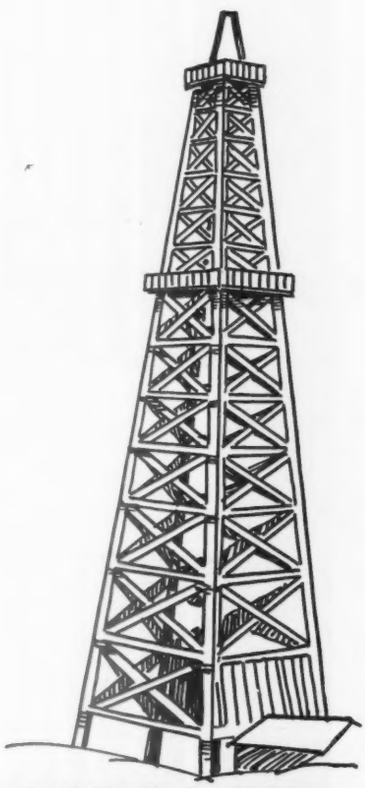
Just as man designs powerful motors to achieve stunning speed, so does *Layne* manufacture screens to amaze the oil industry!

The new *Milled Groove* invention is an example of ingenuity that shatters all precedents among screens (*Layne* has enjoyed leadership in screen manufacture for more than a quarter of a century), for this design increases production from *33-1/3% to 100%* over old type screens—verily, the seemingly impossible.

It stands to reason that you should install *Milled Groove* today if you can get more barrels of oil per day out of the same old well without additional help, without additional subsequent expenditure. It does not take keen analyzation prowess or vizualization powers to see what the installation of *Milled Groove* will do for you.

And, in *Milled Groove* you will have in your possession utmost durability and dependability.

Install now instead of later!



The Layne & Bowler Co.
Houston THE LAYNE **Texas**
Increases Production

The Layne New York Company, 30 Church St., New York
The Layne & Bowler Corp., Los Angeles, Calif.
Vickers, Limited, London, England

LEADERSHIP IN SCREEN MANUFACTURE FOR MORE THAN A QUARTER CENTURY

Not Just an Off-and-On Service

Out of the development of every basic industry rises a few outstanding institutions. They have arrived because they have served. Norvell-Wilder's position in the oil industry is due to a service based on eighteen years of intimate knowledge of the oil business . . . a regular service, not just an off-and-on service.

You gain a big advantage by dealing with a firm that can give immediate service from standard and time-tested equipment carried in stock . . . that can furnish you everything you need from spudding in to connecting up with the pipe line. A few of the many lines carried are: LUNKENHEIMER COMPANY, Valves, Steam and Engineering Specialties . . . GARDNER-DENVER COMPANY, Pumps and Compressors . . . JONES & LAUGHLIN STEEL CORPORATION, Standard Pipe Line Pipe, Seamless and Lapwelded Oil Country Pipe . . . KEROTEST MANUFACTURING COMPANY, Cast Steel Valves and Fittings . . . JEFFERSON UNION COMPANY, Screw and Flange Unions . . . HERCULES MOTORS CORPORATION, Engines and Power Units . . . PENBERTHY INJECTOR COMPANY, Injectors, Water Guages, Steam Specialties . . . NEW YORK RUBBER CORPORATION, Belting, Hose and Packing . . . LUCEY PRODUCTS CORPORATION, Engines, Drawworks, Boilers, Swivels, Grief Stems . . . CHAIN BELT COMPANY, Chabelco and Deepwell Rotary Drilling Chains.

FORT WORTH
SHREVEPORT
BEAUMONT
HOUSTON

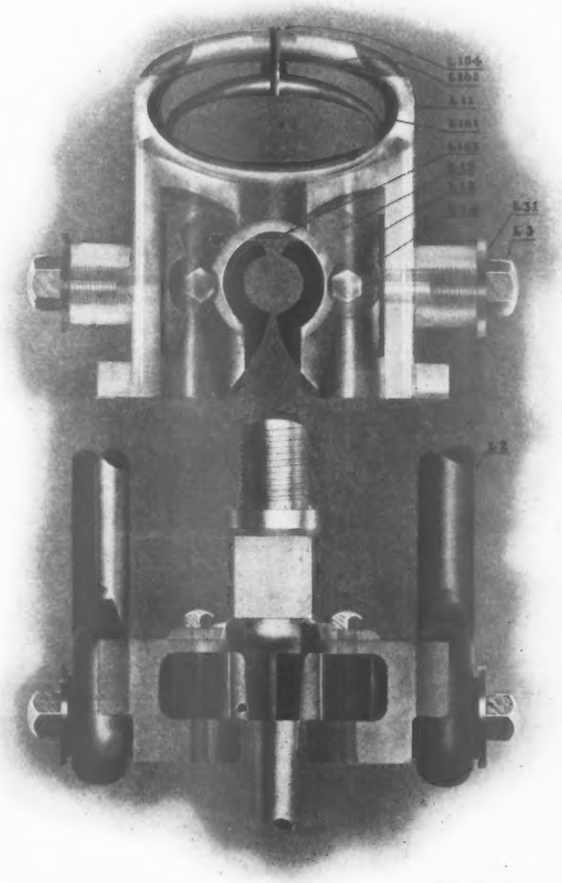
NORVELL-WILDER SUPPLY CO.

A NEW SHAFFER SPECIALTY COMPANY PRODUCT

Taylor-Mildren
Safety Sucker Rod Elevator

An entire new departure in sucker rod elevator design, incorporating mechanical features that make this the first real safe elevator.

Light in weight — maximum strength is obtained by economic distribution of material. Simplified design—elimination of many parts.



Pat. Pend.

Will not clog with grease and sediment.

Latch is not dependent upon springs for safe locking.

Rod is locked by a wedge. When pulling the elevator cannot be disconnected from the sucker rod, unless the wedge latch is withdrawn by hand and the elevator lowered to clear the shoulder recess in the elevator.

Circulars and prices upon application.

THE SHAFFER SPECIALTY CO

PATENTED OIL WELL EQUIPMENT

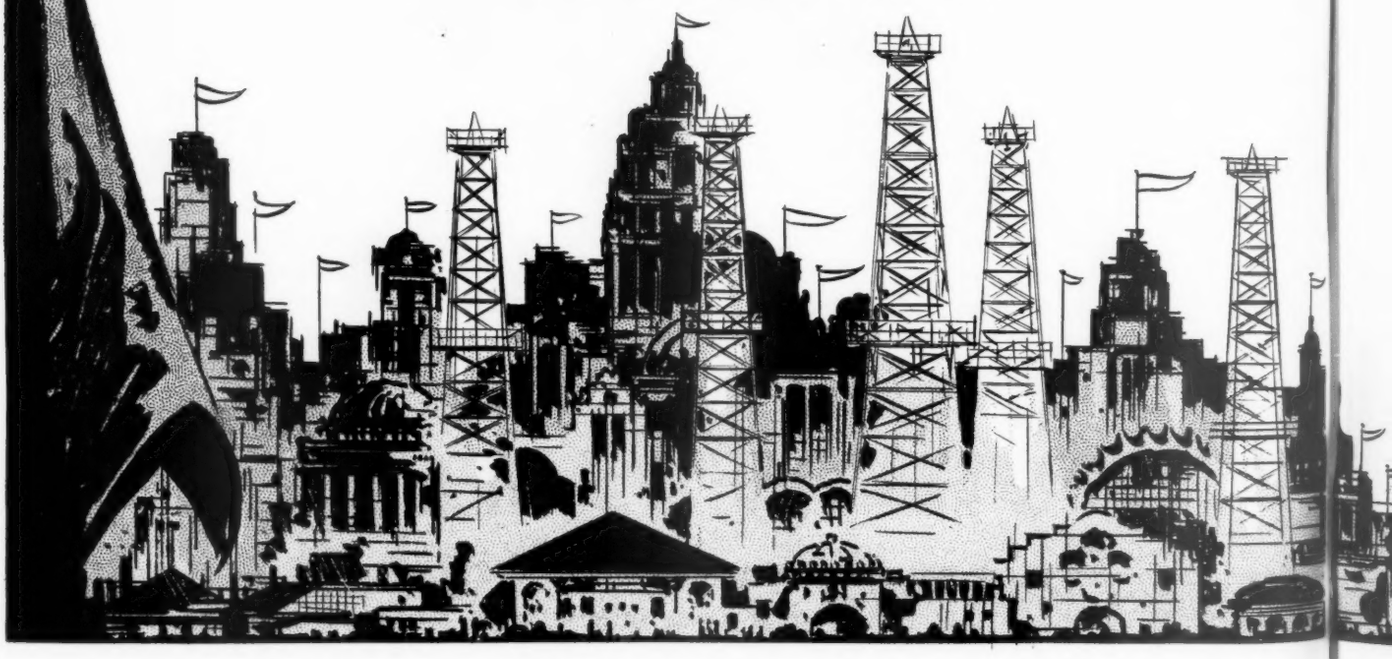
SHAFFER PRODUCTS
"are precision made"

Factory & General Offices: 113-115 South Denver, Tulsa, Oklahoma
P. O. Box 1434 Telephone 7271

ANNOUNC

The 6th. International Petroleum Exposition

Oct. 5-12, 1929.
Tulsa, Okla. U.S.A.



The WORLD'S FAIR

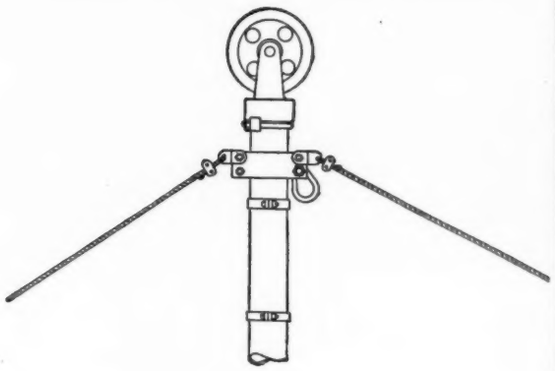
CING

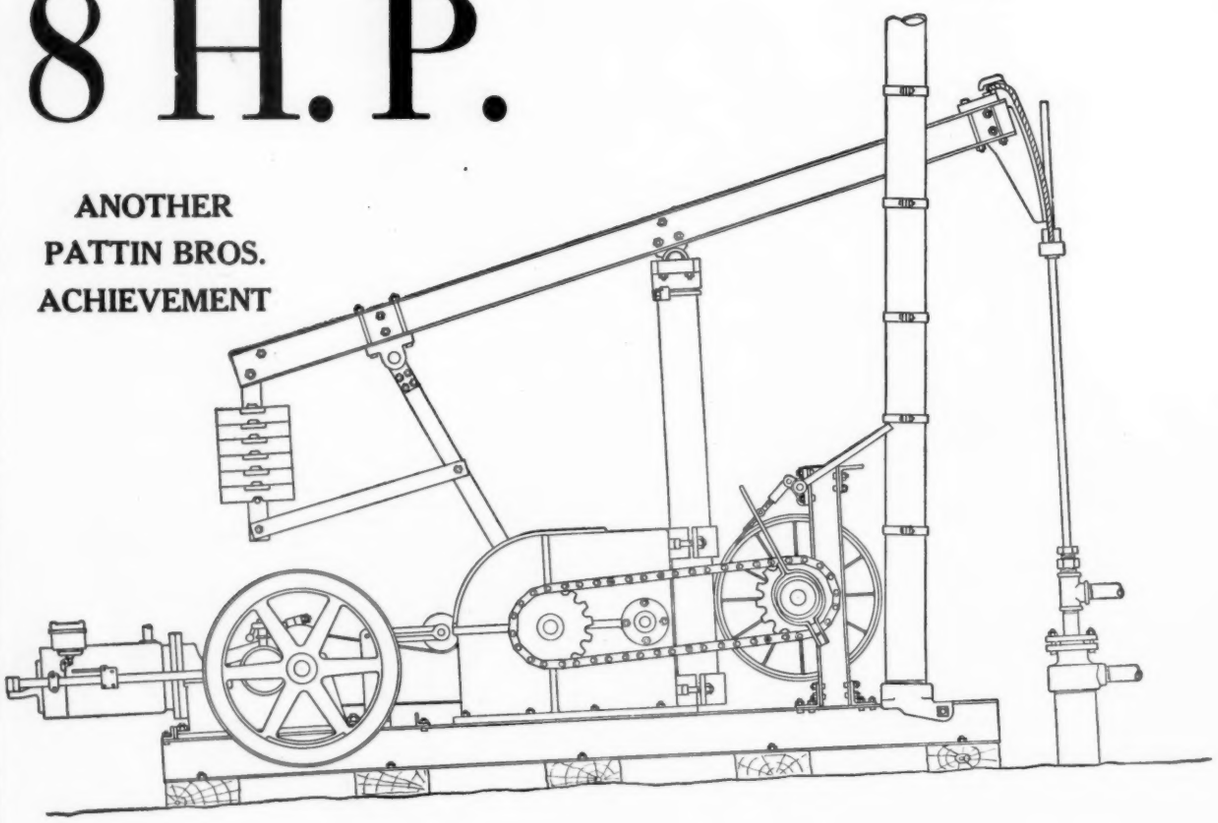
Plan NOW to attend the International Petroleum Exposition and Congress at Tulsa, October 5th to 12th. See the Petroleum Industry as a whole, at one time and place . . . an educational display and demonstration of the latest methods and machinery for prospecting, producing, refining, transporting and marketing.

For any information, address the International Petroleum Exposition, William B. Way, General Manager, Tulsa, Oklahoma, U. S. A.

R of the OIL INDUSTRY

NEW Single Well 8 H.P.





ANOTHER PATTIN BROS. ACHIEVEMENT

THIS new Pattin Bros. power is a single well 8 H.P. beam pumping unit belt driven with belt tightner running on roller bearings. All gears are enclosed, running in oil, and every bearing on power, including pitman, has roller bearing.

It has a 36 ft. mast, spool will hold 3,000 ft. ½ inch line; two brake bands 26 inches diameter, 3 inch face, operated by hand or foot clutch on spool. Shaft can be thrown in or out while spool is running. Engine is fitted with force feed lubricator suitable for twenty-four hours run.

Mast and spool are independent of pumping unit and can be moved from one power to another, thereby saving the expense of mast and spool for every power.

We recommend this power for wells 2,500 feet deep. It will pull rods or tubing or handle bailer.

Prices and circular on request.

PATTIN PRODUCTS

- Gas Engines
- Air and Gas Compressors
- Vacuum Pumps
- Shackle Irons
- Pumping Powers
- Oil Country Boilers
- Steel Storage Tanks
- Water Pumps
- Torpedo Reels and Clamps
- High Pressure Tanks
- Howe Casing Heads

The Pattin Brothers Company

MARIETTA, OHIO

Tulsa, Okla.	Coleman, Texas	Wichita Falls, Texas	Putnam, Texas	Bradford, Pa.
A. S. Dunnington	J. Barnes	J. W. Noland	Putnam Supply Co.	The Blaisdell Machinery Co.

THE PATTIN BROS CO

VEZ REG. U. S. PAT. OFF. for treating cut oil covers conditions of widest diversity

Adequate research and manufacturing facilities are maintained to insure formulas that will save you time and money. The Vez Company is organized for service and its sole aim is to serve you better ◆▶

[A field stock of Vez at warehouse of one of Oklahoma's major oil producing companies]

The Vez Company

Manufacturing Chemists
2221-3 Laws Street
Dallas, Texas

"Ask the Man Who Uses It"

BRISTOW, OKLAHOMA
WEWOKA, OKLAHOMA
WICHITA, KANSAS

TULLOS, LOUISIANA
WICHITA FALLS, TEXAS
BRECKENRIDGE, TEXAS

LULING, TEXAS
BIG SPRING, TEXAS
WINK, TEXAS

PAMPA, TEXAS
BENAVIDES, TEXAS

EL DORADO, ARKANSAS
SEAL BEACH, CALIFORNIA

"MEANT A BIG SAVING TO ME IN FREIGHT CHARGES ALONE!"

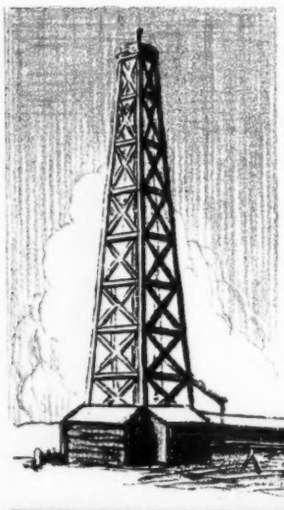
3

"A DRILLER like me out wildcatting has too blamed many chances to lose without tossing one little dime's worth of unnecessary expense on the pile.

"That's why I rely on Bridgeport Rental Service. I found out long ago that their Swan underreamer will dive right through the very toughest jobs—quicker and cheaper than any other. And when I let those boys know I need a tool,—they get it out right now, no matter how far away I happen to be.

"Bridgeport Rental Service has saved me money in lots of ways, especially when I'm way out like this. Take for example freight charges which they pay up to as much as 10% of the rental fee—just that one feature *has meant a big saving to me in freight charges alone.*"

Bridgeport Rental Service is the name that identifies the world's largest and most extensively used rental service. Producers and drilling contractors everywhere are saving vast amounts of time and money by securing through it the most dependable underreamers and fishing tools—quickly and at minimum expense. Even to the wildcatter, far removed from his sources of supply, an unusual saving is made through our provision to pay all freight charges up to as much as 10% of the rental fee.



Study the other outstanding features of our service—outlined below. Then let it save time and money for you when your next 'tough break' calls for an underreamer or fishing tool.

WHAT BRIDGEPORT RENTAL SERVICE MEANS TO EVERY DRILLER!

1. Underreamers and fishing tools shipped anywhere on request — then if not used in a reasonable length of time, returned to us. No rental charged.
2. The famous Swan Underreamers — guaranteed to be in the best of condition, rented direct from their manufacturer—or distributors.
3. We allow transportation charges, not exceeding ten per cent of rental fee, when our tools are shipped by public carrier.
4. Rental fee charged only from the time tools leave the transportation company, to the time they are returned to them.
5. Branches throughout the oil fields, with complete stocks of underreamers and fishing tools for rental service.
6. Twenty-four-hour service is maintained at every branch, for prompt action day or night on any need. Phone calls or wires accepted collect.

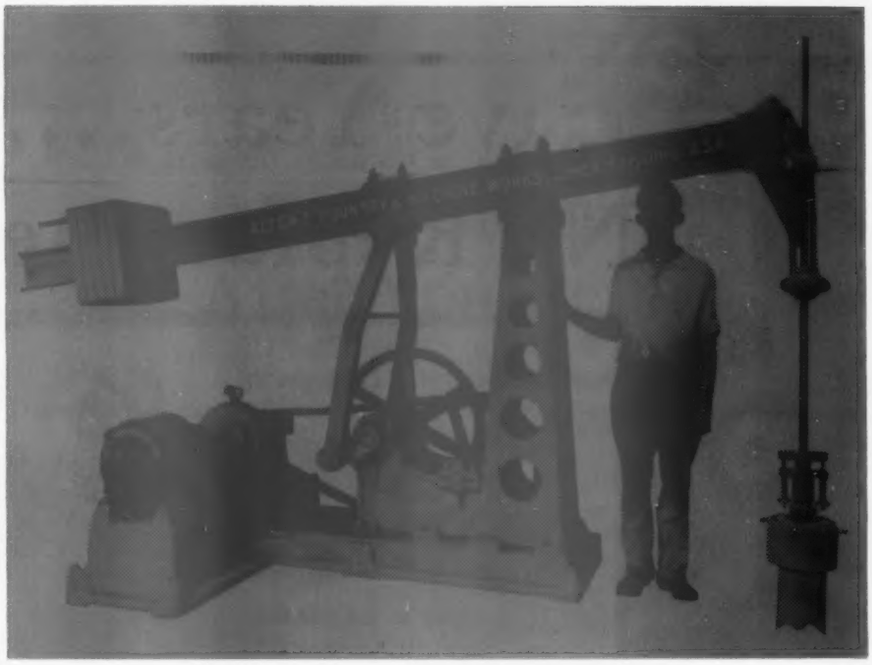
"BRIDGEPORT RENTAL SERVICE - MOST EXTENSIVE - LEAST EXPENSIVE"

THE BRIDGEPORT MACHINE COMPANY

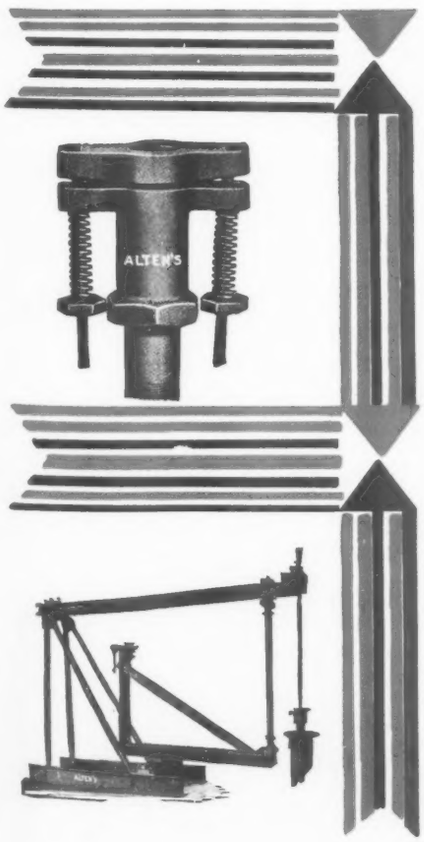
GENERAL OFFICES & FACTORY

WICHITA, KANSAS

Branches Throughout The Oil Fields



GUARANTEED BY THEIR NAME



The name ALTEN on a piece of oil field equipment has been for forty years a definite pledge of highest quality. Today these products are giving superior performance in every oil field of the world. The remarkable performance of Alten products is due mostly to their outstanding features of construction . . . that and the quality of the materials and workmanship that go into them.

Since 1889 we have been watching these products in actual service and constantly producing modern, improved equipment to help in the production of oil. Today there are over a hundred items in the Alten line . . . all high-grade, long-lasting and smooth-operating products that it will pay you to know.

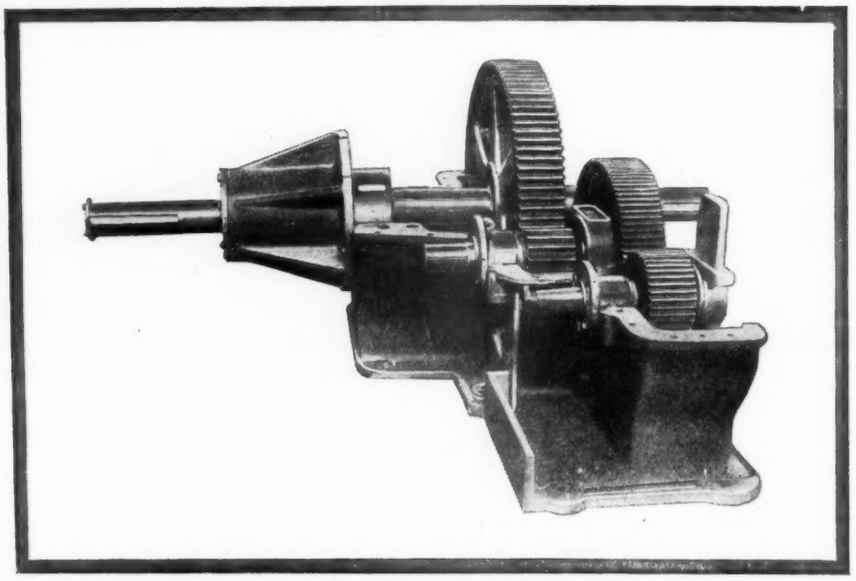
Ask Your Supply House

ALTEN'S

Foundry and Machine Works

Established in 1889 LANCASTER, OHIO

Five Years....
No Replacements



An exposed view of a Westinghouse-Nuttall double reduction oil well unit. All gears and pinions are heat-treated by the BP process.

with BP Heat-treated Gears

IN the more than five years since Westinghouse-Nuttall oil well gear units were first placed in service, there has never been a necessity for replacing a gear or pinion on a single unit because of breakage or excess wear.

This incomparable record is the accomplishment of gears and pinions heat-treated by the exclusive BP process. Their "tough-hard" structure is four times harder than untreated gears, capable of carrying four times greater load and having three times more resistance to impact shock.

Gears and pinions with these extraordinary qualities are standard on all Westinghouse-Nuttall oil well units, giving evidence of the exceptional dependability which they assure in the most rigorous of oil well operations.

Oil Well Supply Company, Authorized Distributor for Westinghouse-Nuttall Units.

WESTINGHOUSE ELECTRIC & MFG. CO.
Nuttall Works Pittsburgh, Pa.

Westinghouse

T 30388

Serves the Oil Industry with . .

Arc Welding Equipment
Automatic Electric Babbitt Pots
Change House Heaters
Circuit-breakers
Flood Lighting Equipment
Insulating Materials
Motor Control
Panelboards
Rig Lighter Sets
Safety Switches
Twin-motor Drilling Equipment
Two-speed Pumping Equipment

Darling Forged Steel Gate Valve for drilling well control, flow lines and other hazardous conditions

Keep the Oil After You Get It

It's one thing to coax the oil out of the stubborn ground and it's another thing to keep it once it is in your grasp.

Place Darling Forged Steel Valves at the vital points—where control of high pressures means the saving of thousands of barrels of oil. True enough you invest a trifle more for this extra strength, but it pays—pays big!

Darling Valve & Mfg. Company

Williamsport Pa.

New York Chicago Oklahoma City Houston

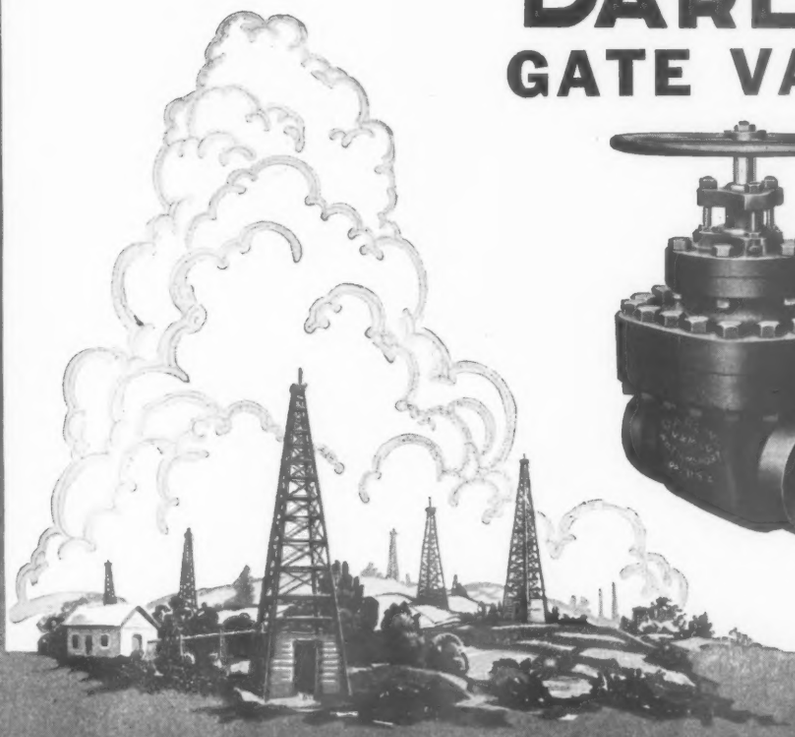
Mid-Continent Distributors:

Frick-Reid Supply Corp. Atlas Supply Co.
International Supply Co. Petroleum Supply Co.
Happy Belting Company

California Distributor:

Petroleum Equipment Company, Los Angeles

DARLING GATE VALVES



Darval Semi-Steel Gate Valve. Made in all sizes for general field use, pipe lines, drilling through, well control and well flow lines

606

Modern Drilling Requirements *make their use imperative!*

H. C. Smith Type "C" Coring Outfit

H. C. Smith Type "B" Demountable Drilling Bit

The H. C. Smith Type "C" Coring Outfit provides you with the underground facts which enable efficient, successful drilling operations. The H. C. Smith Type "B" Demountable Drilling Bit provides the means for making hole faster, more economically, and with a higher factor of safety.

The H. C. Smith Type "C" Coring Outfit

Takes perfect cores in any formation that a regular disc, fishtail or 4-way bit will penterate. For extremely hard formations, bits are set with a diamond substitute metal. Renewable cutterheads, economically replaced when dull, eliminate expense and trouble of rebuilding. Clean, well formed cores insured by circulation close to cutter teeth. All four blades cut to same gauge and keep hole out to gauge. Made of high-carbon steel—extra strong—light in weight.

The H. C. Smith Type "B" Demountable Drilling Bit

Of new design that improves drilling performance. The 4-way construction lessens the strain on drill pipe. Serrated construction of bit blades permits easier penetration of either hard or soft formations. Winged section steadies the bit in the hole. All bits heavily set with diamond substitutes, then hard faced, insuring faster and more efficient drilling. Made of highest grade forged alloy steel. Will not "diamond point." Can be changed by any member of the crew in two or three minutes.

H. C. SMITH MANUFACTURING CO., Inc.

Los Nietos, California

Branch Offices and Warehouses:

Bakersfield, Calif. **Ventura, Calif.**

Cable Address: **"Smithco, Whittier"**

Oil Well Supply Co., Exclusive Sales Distributors, Outside of California for H. C. Smith Coring Equipment and Demountable Drilling Bits.

BETTIS PROTECTORS Never Fail

ONCE USED. *always used!*

FULLY PATENTED

"Best bet yet!"

Primarily designed to protect the casing and drill pipe from abrasion, Bettis Protectors contribute many other advantages, directly and indirectly,—such as saving fuel, reducing vibration, lengthening life of wire lines, minimizing twistoffs, making straighter hole and helping relieve all equipment of excessive wear and tear.

Consider the simplicity of the Bettis made of *one-piece* rubber—compounded by the most scientific methods. It snaps over the pipe and *stays* where placed. No seams, no hinges or pins, no metal added to hole—nothing to cause a bad fishing job. They've never failed—not once.

Patterson-Ballagh Corp.
Insurance Exchange Building
Los Angeles

Mid-Continent Distributors:
Bettis Sales Co., 616 Public Nat'l Bank Building, Houston

New York Office: 39 Cortlandt St.

Carried in stock at Los Angeles, Santa Fe Springs, Ventura, Bakersfield, Coalinga, Long Beach, Tulsa, Houston, Wink, Texas, New York City

Baker-Burch Cement Float Shoe
Is The Modern Deep Drilling Essential

Floating equipment is an essential in deep well drilling, and this need, prior to the advent of Baker Cement Equipment, was filled in a more or less satisfactory way by the Cast-Iron equipment then available.

But cast-iron equipment was satisfactory only because there was nothing better available. This is evidenced by the instantaneous and world-wide demand for Baker Cement Equipment immediately upon its introduction.

Wise operators saw at once that here, at last, was the kind of equipment they had wanted for a long time. They quickly demonstrated its superiority by using it in their own operations. And today, no matter where you go, you'll find Baker Cement Equipment being used, many Companies having made it standard equipment for all their operations.

The Baker-Burch Cement Float Shoe is a plain casing shoe with a solid concrete guide-shaped plug containing a celeron ball check valve, cast and anchored in rounded grooves in the shoe. It is safer and much stronger in every way than a cast-iron floating plug. It is easily drilled out and the cement is circulated away without trouble, without leaving any foreign material in the well to obstruct further operations. Specify BAKER and insist upon getting it.

—NOW GET THESE FACTS—

What the Name "BAKER" Stands For

Back in 1913, when R. C. Baker started the Baker Casing Shoe Company to manufacture and distribute the now famous Baker Casing Shoe, he established this principle: "All tools and equipment bearing the name 'Baker' must comply with the following specifications:

"They must be made of materials which are of the highest standard for the purpose for which they are to be used;

"No tool or item of equipment shall be placed on the market until it has been thoroughly field-tested and has demonstrated its ability to stand up, with a reasonable factor of safety, in the work for which it is intended to be used.

"Quality shall be of a uniformly high standard, and such that customers will place the utmost reliance in Baker products."

This, stated very briefly, is the basis upon which has been builded a world-wide business and Baker products will be found in every oil field, no matter where located.

Baker Cement Equipment, in its inception, was the answer to a long-felt and very pronounced need and was placed on the market only after the most rigid tests and after it had been found fully in alignment with the above specifications.

The introduction of Baker Cement Equipment was marked by world-wide endorsement and approval and it has withstood even the most difficult and unusual tests in field work under every known condition.

Operators everywhere have had their judgment in buying Baker Cement Equipment upheld by its performance and once more—"Baker Scores a Touchdown."

Baker Cement Equipment is the original and only equipment of its kind and is fully covered by Patents Nos. 1035674, 1491915, 1561768, and 1603447.

There's just one way to be sure that you're right and not taking any chances in losing the well—specify and insist upon getting Baker Cement Equipment.

Export Sales Office:
25 Broadway, New York City

Mid-Continent Branches:
Tulsa, Okla.
Houston, Texas

BAKER
OIL TOOLS, INC.
Box L, Huntington Park, Calif.

California Branches:
COALINGA TAFT BAKERSFIELD VENTURA

Mid-Continent Distributors:
B & A SPECIALTY CO.
220 E. Brady St., Tulsa, Okla.
2301 Commerce St., Houston, Texas